Moisture Contamination

Sullair Refrigerated and Regenerative Compressed Air Dryers Solve the Problem
Water in compressed air causes corrosion.

- All ambient air entering a compressor contains water vapor.
- The vapor cools and condenses into water in your air lines.
- Water jeopardizes everything you want your compressed air system to do.
- Compressed air can also contain dirt, wear particles, bacteria and lubricating fluid.
- Water mixes with these pollutants to form an unwanted abrasive sludge.
- This sludge, often acidic, rapidly wears tools and pneumatic equipment.
- Sludge blocks valves and orifices, causing high maintenance and costly air leaks.
- Sludge corrodes piping systems, and can foul product and air-operated devices.

How much water is too much?
Any amount of water is too much.

- 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 135°F at 100 psig, the water vapor condenses into 46 gallons of liquid!
the Sullair solution:

A Sullair compressed air dryer.

• Improves productivity and reduces maintenance costs.
• Air lines won’t corrode; no need to drain or purge.
• Pneumatic equipment runs at peak efficiency.
• Increases the service life of air tools, motors and cylinders.
• Improves both product and process quality.
• Pneumatic instruments and controls operate reliably.
• Painting/finishing operations quality is improved.

The benefits of a Sullair dryer:

• Sullair offers a wide variety of dryers to meet varied dew point needs.
• Sullair dryers are matched to Sullair compressor capacities.
• The Sullair line includes both refrigerated and regenerative types of dryers.
• Refrigerated dryers provide dry air to 35°F to 39°F (2°C to 4°C) and 50°F (10°C) pressure dew point.
• Regenerative dryers are ideal for sub-freezing temperatures and for process air that requires extremely low water content.
• Consistent outlet dew points over a wide range of operating conditions.
• Low energy usage and low pressure drop for greater operating efficiency.
• Quality manufacturing and materials assure long, trouble-free service life.
Sullair SR refrigerated dryers

Standard features:

60 HZ Models SR-5 to SR-100, 50HZ Models SR-2 to SR-30
- Environmentally friendly refrigerants.
- Tube-in-tube heat exchangers.
- Two-pass air system.
- Compact design permits wall mounting.

60 HZ Models SR-125 to SR-3000, 50HZ Models SR-40 to SR-1100
- Environmentally friendly refrigerants.
- Combination aluminum finned, cross-flow heat exchanger.
- Integral demister moisture separator.
- Two-pass air system.
- Energy efficient scroll compressor on
  60HZ Models SR-325 to SR-3000,
  50HZ Models SR-110 to SR-1100.
When to choose a refrigerated dryer.
SR dryers are designed for installations where pipeline temperatures are not expected to go below 35°F to 39°F (2°C to 4°C) or when process requirements demand a lower dew point.

These dryers cool compressed air by mechanical refrigeration, removing the moisture and assuring that none condenses downstream, unless the air is exposed to lower temperatures. With models ranging from 5 to 3000 scfm (.15 to 85 m³/min), you can specify an SR dryer that is virtually customized to your requirements.

Simple operating principle.
These refrigerated dryers reduce the temperature to 35°F to 39°F (2°C to 4°C). Hot saturated air enters at line pressure. As the compressed air is cooled, the water vapor condenses and liquid is removed by a separator.

• Models SR-5 to SR-100 60HZ (SR-2 to SR-30, 50HZ) use a two-pass system. On these dryers, compressed air is cooled in a tube-in-tube, air-to-refrigerant heat exchanger. Dry air is discharged with 35°F to 39°F (2°C to 4°C) pressure dew point.

• Models SR-125 to SR-3000 60HZ (SR-40 to SR-1100 50HZ) use a two-pass air system. Compressed air is pre-cooled in the air-to-air heat exchanger to reduce refrigeration load, resulting in a more efficient refrigeration system. The compressed air is further cooled in the air-to-refrigerant exchanger and dry air is discharged through the air-to-air heat exchanger with 35°F to 39°F (2°C to 4°C) pressure dew point.
Sullair SD regenerative dryers

Standard features

- Activated alumina desiccant with superior adsorption capacity.
- Proven, compact valves on models SD-220 to SD-600 operate using minimal moving parts.
- Three-way plug and angle-seated valves on SD-820 to SD-3400 for inlet air switching and purge exhaust control.
- Purge control regulates purge flow in relation to dry air output.
- Repressurization circuit with PLC controls for added reliability.
- Desiccant towers are ASME code stamped and CRN approved.

Designed for sub-freezing temperatures.
These regenerative dryers are ideal for installations with outdoor compressed air piping, and for processes that require an extremely low dew point to -40°F (-40°C) as standard and optional -100°F (-77°C).

Sullair SD dryers use desiccant material to adsorb water vapor from compressed air. By combining the proven benefits of desiccant drying with the most advanced designs, Sullair offers an extremely compact, reliable system to clean and dry compressed air for the most critical applications. The SD dryers range in capacity from 220 to 3400 scfm (6.3 to 96.3 m³/min).

Easy installation.
The SD dryers are packaged and ready to pipe up. Sullair recommends using a Sullair coalescing filter upstream to assure long desiccant life and a Sullair particulate filter downstream to catch desiccant carryover.

Optional feature.
Energy-saving dew point dependent switching.
Sullair SM modular regenerative dryers

Standard features

- Small footprint. Lightweight advanced design.
- High tensile extruded aluminum construction.
- Tested to comply with ASME, CRN, TUV and other international pressure vessel codes.
- Moisture indicator to monitor air quality.
- Snowstorm filled to prevent fluidization and channeling.
- Superior corrosion protection.
- Quick Repressurization Valve (QRV) ensures smooth changeover and improved reliability.

The SM dryers are designed for dew points of -40°F standard and optional -100°F.

Modular design flexibility.

In the SM dryers, Sullair presents a new concept in technology. Sullair’s modular dryer design offers total installation flexibility to meet your specific needs. The design utilizes aluminum extrusions that are fully corrosion-protected, inside and out, resulting in a dryer that can withstand rigorous environments.

The SM dryers are available from 3 to 1650 scfm (.1 to 46.8 m³/min).

Easy expansion.

The modular construction allows you to expand your dryer package by adding individual units to meet increased compressed air needs in the future.

Multiple banking.

With multiple banking, you can isolate individual units for service and maintenance, while maintaining a continuous supply of dry, clean compressed air.

Less than half the size.

Sullair’s SM dryer design is compact and lightweight, and is less than half the size of traditional twin-tower dryers.

Optional feature.

Energy-saving dew point dependent switching.
**Sullair OS oil/water separator**

**For the environment’s sake... use a Sullair oil/water separator**

A 75 hp compressed air system can produce more than 16,000 gallons of oil-contaminated condensate a year. Recognizing that the safe removal of industrial wastewater is vitally important for our environment, Sullair offers compressor users a solution: the Sullair Oil/Water Separator. These separators, which can be installed on site, guarantee clean discharge water and ensure compliance with environmental laws.*

**How it works**
1. Condensate enters inlet chamber and expands.
2. Liquid separates by centrifugal motion; drains into the primary tank.
3. Dirt settles at the bottom of this tank.
4. Condensate flows into the main tank.
5. Oil separates from the water and coalesces at the surface of the main tank.
6. Oil is removed and collected in an external container.
7. Water passes through the pre-filter(s) for bulk contamination removal.
8. Water passes through the carbon filter(s) to remove any remaining oil traces.
9. Clean water is discharged from the unit.

**Designed to last**
Built of polyethylene to prevent corrosion and leakage, the separator features single molded construction. Large inlet chamber and tanks improve separation performance.

**Four inlet ports**
Up to four condensate lines can be connected directly into the separator on models OS-10 through OS-128. Twin tank models feature a patented parallel flow design for longer carbon life and improved performance.

**Optimum performance**
An adjustable funnel in the main tank optimizes oil separation. The carbon stage is sized to ensure that outlet water is oil-free. Sampling valve allows verification of water cleanliness.

**Easy to operate**
Separated oil is stored in an external container for easy removal. The primary tank is accessible for easy cleaning.

* The Sullair Oil/Water Separator will not separate Sullube™ compressor fluid. However, Sullube is environmentally friendly and biodegradable. Consult local authorities.
Sullair SCD condensate drains

**Standard features**

- **Intelligent sensing system** operates with all levels of condensate.
- **Maximum corrosion protection**; suitable for all compressor types.
- **IP65/NEMA 4 Ingress Protection Rating**.
- **Large inlet connections** minimize blockage and air locks.
- **Remote alarm** indicates blockage, overflow and power loss.

**Reliable and energy efficient.**

Because they have no mechanical sensor parts, Sullair SCD condensate drains are extremely reliable. They are economical as well, because they do not release valuable compressed air.

**For all types of condensate.**

Intelligent capacitive sensing works with all types of compressed air condensates such as 100% oil, 100% water or any level of emulsification, including corrosive oil-free condensates.

**SCD benefits.**

- Removes liquid condensate efficiently.
- **Intelligent Sensing System (ISS)** knows when the unit has failed to drain. After ten pulses, remote alarm indicates blockage, overflow and power loss. (Not available on SCD-100.)
- Removes risk of condensate carryover.
- Protects downstream equipment and processes.
- Long service intervals with safe, easy maintenance.

**Wide range.**

SCD-100 and SCD-200 compact drains complement Sullair filters, water separators and small refrigeration dryers. SCD-300, SCD-400 and SCD-500 are designed for higher condensate volumes, as in compressor intercoolers, aftercoolers, air receivers, refrigeration dryers and large separators.
An air quality guarantee that’s as good as gold.

Your Sullair System will deliver the quality of air you specify. Sullair guarantees it.

And that’s as good as gold.
The Sullair Air Quality Guarantee.

Sullair assures that its System—compressor, dryer and filter—will meet specific performance levels throughout its operational life. We offer a one-year test/review period, backed by a purchase refund guarantee, to verify the performance of the Sullair System.

These Systems are not intended to remove carbon monoxide, methyl isocyanate or other noxious, corrosive or toxic gases, vapors or fumes. The system does not provide breathing air.

The Sullair System.
The Sullair System matches a Sullair compressor, a Sullair dryer and Sullair filters. Dry air is filtered to remove atmospheric particulate, aerosols and other pollutants to provide compressed air for general purposes to the most critical application.

Two levels of air quality.
Sullair recognizes that the requirements for air quality vary according to each compressed air application. For this reason, we provide Systems that achieve two distinct levels of air quality.

Level 1.
This System consists of a Sullair compressor and Sullair MPF and MPH or PF/PH filters. The compressed air from this system contains particulates no larger than .01 micron, including coalesced liquid water and lubricants. Maximum remaining oil aerosol content is 0.01 parts per million by weight (ppm/w) @ 70°F, including oil vapor. The air from this Sullair System meets the most stringent ISO standard (ISO 8573.1, Class 1) for air quality.

Level 2.
Level 2 offers the highest quality compressed air for critical applications. The air from this Sullair System exceeds the ISO standard (ISO 8573.1, Class 1) for air quality with the use of the MPC or PC filter. The System includes a Sullair compressor and Sullair MPF, MPH and MPC or PF, PH and PC filters. The odor-free compressed air from this system contains particulates no larger than 0.01 micron, including water and oil aerosol content of 0.01 ppm/w @ 70°F. The remaining oil vapor content is less than 0.003 ppm/w.

Select the System.
Select the air quality level to meet your plant air or process requirements. You can be assured that the quality of air from the Sullair System you specify will remain consistent for the life of the equipment. Sullair guarantees it. And that’s as good as gold.
Global Service Support and Worldwide Parts Availability

Your investment is supported by an experienced team of compressed air experts. Our global network of authorized Sullair distributors and field representatives provides responsive, knowledgeable service, including on-site and factory-based assistance, to Sullair customers around the world.

Because Sullair believes that using Genuine Sullair Replacement Parts is critical for optimum performance, we make them available on a global basis. Through our computer-based system, our distributors can procure Genuine Sullair Replacement Parts for any piece of Sullair equipment in any part of the world, quickly and efficiently.
The Problem
Virtually all compressed air systems contain some water, dirt, rust or even degraded lubricating oil which all mix together to form unwanted compressed air condensate. This abrasive sludge collects in piping systems, filters, aftercoolers and dryers and must be efficiently removed before it brings your production process to an expensive standstill.

Why oil is a problem?
Oil can seriously effect the efficient operation of sewage purification by obstructing oxygen transfer to the bacteria essential for sludge digestion. Because of the serious effects oil can create, very low industrial discharge limits are permitted. Rigid legislation protects the environment against contamination.

Most users of compressed air systems are unaware of exactly how much condensate is produced by their system each year, and the effect it can have on the environment. For example: A 75 hp compressed air system can produce more than 16,000 gallons of oil-contaminated condensate a year and just one gallon of oil can cover 4 acres of water surface.

Recognizing that the safe removal of industrial wastewater is vitally important for our environment, Sullair offers the Sullair OS Oil-Water Separator. These separators, which can be installed on site, guarantee clean discharge water and ensure compliance with environmental laws.*

Special Features
- Single piece units – reduce overall footprint
- Rugged, corrosion resistant, polyethylene construction, includes ribbing for extra strength.
- Large centrifugal inlet chamber provides effective venting of compressed air, while two inlet ports and four inlet chamber positions simplify installation.
- Large, easily cleaned primary settlement chamber for the accumulation and removal of dirt particles
- Large main tank increases settlement time and reduces oil carryover to carbon filter stage.
- Large internal passages reduce risk of an internal blockage and simplify maintenance.
- Oil absorbing pre-filter(s) protect carbon stage from bulk contamination.
- Large carbon stage for increased contact time, improving water quality and extending carbon life.
- High specification carbon for improved service intervals.
- Adjustable oil outlet funnel for the efficient removal of separated oil.
- Sealed external oil container for easy disposal.
- Sample tap removes need to disconnect outlet piping when obtaining a test sample.

* The Sullair Oil-Water Separator will not separate Sullair Sullube compressor fluid. However, Sullube is environmentally friendly and biodegradable. Consult local authorities.

This product is manufactured to the highest quality standards in an ISO 9001 certified quality system.
**How it works**

Condensate from the system will enter the oil/water separator under pressure, and is allowed to expand in the specially designed centrifugal inlet chamber.

Liquid will drop out of the air stream as it impinges on the chamber walls of the vortex generator, draining without turbulence into the primary settlement chamber below.

Dirt particles suspended in the condensate will settle to the bottom of the primary settlement chamber and the accumulating condensate will then flow into the main settlement tank.

Entrained droplets of oil dispersed in the water will rise to the surface due to the lower specific gravity of the oil, eventually coalescing to form a thick layer on the surface.

An adjustable oil funnel allows the oil to be continuously skimmed off the surface. Drained oil is collected in the external oil container where it can be disposed of according to legal requirements.

Cleaner water taken from the bottom of the tank, flows into the carbon stage, through a pre-filter, into the top of the carbon bags.

Any entrained droplets of oil remaining are then removed by adsorption.

The cleaned water can now be safely discharged to the sewer through the outlet.

**Selection Criteria**

There are many factors which are important in the selection of Sullair OS Oil/Water Separator. Ambient conditions of the installation site is the most important.

Correct selection is critical for the operation of the Oil/Water Separator. Increased condensate flow through a Separator reduces settlement time in the main tank, increases oil carry-over to the carbon stage and reduces contact time with the carbon. The overall effect of incorrect sizing is poor outlet water quality, reduced carbon filter life and the potential for overflowing.

Capacities shown in this literature are shown for average climate conditions. In conditions other than those shown, use the Correction Factors provided. If additional sizing assistance is required, please contact Sullair or your local Sullair distributor.

Due to the wide range of lubricants used in modern compressors, it would be difficult to make specific recommendations on their individual performance of separation from condensate. Generally air compressor lubricants fall into one of the following classifications:

- Mineral
- Poly alpha olefins (PAO)
- Trimethylolpropane Ester (TMP)
- Pentaerythritol Ester (PE)
- Diesters
- Triesters
- Polyoxyalkylene glycol (PAG)
- Automatic transmission fluid (ATF)

To simplify the selection, lubricants have been split into three classifications depending upon their ability to separate within the Oil/Water Separator.

**Classification A:**
- Turbine Oil,
- Additive Free Oil

**Classification B:**
- Mineral,
- Poly alpha olefins (PAO)
- Trimethylolpropane Ester (TMP)
- Pentaerythritol Ester (PE)
- Sullair SRF 1/4000
- Sullair II/8000
- Sullair 24KT

**Classification C:**
- Diesters
- Triesters
- Polyoxyalkylene glycol (PAG)
- Automatic transmission fluid (ATF) cannot be separated by the OS Oil/Water Separator.

**Drain Type**

The condensate should be removed from the compressed air system using a drainage method that does not cause emulsification of the condensate and is appropriate for the unit. Usually methods include:

- Level Operated Electronic Drain
- Float Drain
- Timed Solenoid Drain*

Sullair recommends the use of Sullair SCD condensate drains. Manual and Thermodynamic Disc trap drains must not be used with the Oil/Water Separators.

*If the use of Timed Solenoid Drains is unavoidable, steps must be taken to reduce the air loss as this has an emulsifying effect on the condensate.

**Refrigerated Dryers**

A refrigerated dryer installed in a compressed air system can significantly increase the condensate produced. The oil/water separator must be sized appropriately to treat the extra condensate produced. Flow capacities on the facing page are shown both with and without a refrigerated dryer installed.

Important Note:

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.
Sullair O/S Oil-Water Separator
Model Selection.

<table>
<thead>
<tr>
<th>Model</th>
<th>Classification A</th>
<th>Classification B</th>
<th>Classification C</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS-1</td>
<td>87 cfm</td>
<td>73 cfm</td>
<td>60 cfm</td>
</tr>
<tr>
<td>OS-16</td>
<td>138 cfm</td>
<td>117 cfm</td>
<td>95 cfm</td>
</tr>
<tr>
<td>OS-20</td>
<td>212 cfm</td>
<td>181 cfm</td>
<td>147 cfm</td>
</tr>
<tr>
<td>OS-33</td>
<td>441 cfm</td>
<td>375 cfm</td>
<td>305 cfm</td>
</tr>
<tr>
<td>OS-49</td>
<td>822 cfm</td>
<td>750 cfm</td>
<td>610 cfm</td>
</tr>
<tr>
<td>OS-94</td>
<td>1174 cfm</td>
<td>1000 cfm</td>
<td>812 cfm</td>
</tr>
<tr>
<td>OS-128</td>
<td>2352 cfm</td>
<td>2000 cfm</td>
<td>1626 cfm</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Classification A</th>
<th>Classification B</th>
<th>Classification C</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS-1</td>
<td>65 cfm</td>
<td>55 cfm</td>
<td>45 cfm</td>
</tr>
<tr>
<td>OS-16</td>
<td>103 cfm</td>
<td>88 cfm</td>
<td>71 cfm</td>
</tr>
<tr>
<td>OS-20</td>
<td>159 cfm</td>
<td>135 cfm</td>
<td>110 cfm</td>
</tr>
<tr>
<td>OS-33</td>
<td>330 cfm</td>
<td>281 cfm</td>
<td>228 cfm</td>
</tr>
<tr>
<td>OS-49</td>
<td>660 cfm</td>
<td>561 cfm</td>
<td>456 cfm</td>
</tr>
<tr>
<td>OS-94</td>
<td>879 cfm</td>
<td>749 cfm</td>
<td>607 cfm</td>
</tr>
<tr>
<td>OS-128</td>
<td>1761 cfm</td>
<td>1497 cfm</td>
<td>1217 cfm</td>
</tr>
</tbody>
</table>

**System Conditions**
- Compressor Type: Rotary Screw or Vane
- Ambient Temperature at Compressor Inlet: 70°F (21°C)
- Relative Humidity: 65%
- Compressor Discharge Temperature: 95°F (35°C)
- Refrigerated Dryer Dewpoint If Fitted: 36°F (2°C)
- System Pressure: 102 psig (7 barg)
- * For use with reciprocating compressors, please contact Sullair.

For conditions other than those shown, e.g. higher ambient temperatures, please consult the Correction Factor tables below, or to properly size the Separator, contact Sullair.

**Correction Factor for ambient temperature at the compressor inlet in degrees F.**

<table>
<thead>
<tr>
<th>Temperature °F</th>
<th>40°F</th>
<th>50°F</th>
<th>60°F</th>
<th>70°F</th>
<th>80°F</th>
<th>90°F</th>
<th>100°F</th>
<th>110°F</th>
<th>120°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature °C</td>
<td>4°C</td>
<td>10°C</td>
<td>16°C</td>
<td>21°C</td>
<td>27°C</td>
<td>32°C</td>
<td>38°C</td>
<td>43°C</td>
<td>49°C</td>
</tr>
<tr>
<td>Factor</td>
<td>2.82</td>
<td>1.96</td>
<td>1.39</td>
<td>1.00</td>
<td>0.73</td>
<td>0.54</td>
<td>0.40</td>
<td>0.31</td>
<td>0.22</td>
</tr>
</tbody>
</table>

**Correction Factor for relative humidity of the ambient air at the compressor inlet.**

<table>
<thead>
<tr>
<th>RH</th>
<th>50%</th>
<th>55%</th>
<th>60%</th>
<th>65%</th>
<th>70%</th>
<th>75%</th>
<th>80%</th>
<th>85%</th>
<th>90%</th>
<th>95%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor</td>
<td>1.30</td>
<td>1.18</td>
<td>1.08</td>
<td>1.00</td>
<td>0.93</td>
<td>0.87</td>
<td>0.81</td>
<td>0.76</td>
<td>0.72</td>
<td>0.68</td>
<td>0.65</td>
</tr>
</tbody>
</table>
### Sullair Oil-Water Separator Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>OS-1</th>
<th>OS-16</th>
<th>OS-20</th>
<th>OS-33</th>
<th>OS-49</th>
<th>OS-94</th>
<th>OS-128</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inlet Connection I/D – in (mm)</strong></td>
<td>3/4” (19)</td>
<td>3/4” (19)</td>
<td>3/4” (19)</td>
<td>1” (25)</td>
<td>1” (25)</td>
<td>1” (25)</td>
<td>1” (25)</td>
</tr>
<tr>
<td><strong>Outlet Connection I/D – in (mm)</strong></td>
<td>3/4” (19)</td>
<td>1” (25)</td>
<td>3/4” (19)</td>
<td>1” (25)</td>
<td>1” (25)</td>
<td>1” (25)</td>
<td>1” (25)</td>
</tr>
<tr>
<td><strong>Settlement Tank Capacity – gal (l)</strong></td>
<td>N/A</td>
<td>16 (60)</td>
<td>20 (75)</td>
<td>33 (125)</td>
<td>49 (185)</td>
<td>94 (355)</td>
<td>128 (485)</td>
</tr>
<tr>
<td><strong>Minimum Temperature – °F (°C)</strong></td>
<td>41 (5)</td>
<td>41 (5)</td>
<td>41 (5)</td>
<td>41 (5)</td>
<td>41 (5)</td>
<td>41 (5)</td>
<td>41 (5)</td>
</tr>
<tr>
<td><strong>Maximum Temperature – °F (°C)</strong></td>
<td>95 (35)</td>
<td>95 (35)</td>
<td>95 (35)</td>
<td>95 (35)</td>
<td>95 (35)</td>
<td>95 (35)</td>
<td>95 (35)</td>
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<tr>
<td><strong>Material (Recyclable)</strong></td>
<td>Polyethylene</td>
<td>Polyethylene</td>
<td>Polyethylene</td>
<td>Polyethylene</td>
<td>Polyethylene</td>
<td>Polyethylene</td>
<td>Polyethylene</td>
</tr>
<tr>
<td><strong>Weight Empty – lbs (kg)</strong></td>
<td>13 (6)</td>
<td>22 (10)</td>
<td>26 (12)</td>
<td>59 (27)</td>
<td>79 (36)</td>
<td>154 (70)</td>
<td>214 (97)</td>
</tr>
<tr>
<td><strong>Weight Full – lbs (kg)</strong></td>
<td>54 (24.5)</td>
<td>127 (58)</td>
<td>206 (93.5)</td>
<td>350 (159)</td>
<td>477 (217)</td>
<td>880 (400)</td>
<td>1210 (550)</td>
</tr>
<tr>
<td><strong>Length “A” – in (mm)</strong></td>
<td>12.4 (316)</td>
<td>14.0 (350)</td>
<td>14.0 (350)</td>
<td>26.0 (650)</td>
<td>26.0 (650)</td>
<td>34.0 (850)</td>
<td>34.0 (850)</td>
</tr>
<tr>
<td><strong>Width “B” – in (mm)</strong></td>
<td>10.6 (270)</td>
<td>17.0 (433)</td>
<td>18.0 (450)</td>
<td>20.0 (500)</td>
<td>26.0 (650)</td>
<td>28.0 (700)</td>
<td>39.0 (1000)</td>
</tr>
<tr>
<td><strong>Height “C” – in (mm)</strong></td>
<td>33.0 (842)</td>
<td>32.0 (810)</td>
<td>32.0 (810)</td>
<td>47.0 (1195)</td>
<td>47.0 (1195)</td>
<td>60.0 (1535)</td>
<td>60.0 (1535)</td>
</tr>
</tbody>
</table>

Sullair is committed to a program of continuous improvement. Features and specifications may change without notice. Consult your Sullair representative or authorized Sullair distributor.
### Sullair OS Oil/Water Separators

<table>
<thead>
<tr>
<th>Model</th>
<th>OS-1</th>
<th>OS-16</th>
<th>OS-20</th>
<th>OS-33</th>
<th>OS-49</th>
<th>OS-94</th>
<th>OS-128</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inlet Connection I/D – in (mm)</td>
<td>3/4” (19)</td>
<td>3/4” (19)</td>
<td>3/4” (19)</td>
<td>1” (25)</td>
<td>1” (25)</td>
<td>1” (25)</td>
<td>1” (25)</td>
</tr>
<tr>
<td>Outlet Connection I/D – in (mm)</td>
<td>3/4” (19)</td>
<td>1” (25)</td>
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<td>1” (25)</td>
<td>1” (25)</td>
<td>1” (25)</td>
<td>1” (25)</td>
</tr>
<tr>
<td>Settlement Tank Capacity – gal (l)</td>
<td>N/A</td>
<td>16 (60)</td>
<td>20 (75)</td>
<td>33 (125)</td>
<td>49 (185)</td>
<td>94 (355)</td>
<td>128 (485)</td>
</tr>
<tr>
<td>Minimum Temperature – °F (°C)</td>
<td>41 (5)</td>
<td>41 (5)</td>
<td>41 (5)</td>
<td>41 (5)</td>
<td>41 (5)</td>
<td>41 (5)</td>
<td>41 (5)</td>
</tr>
<tr>
<td>Maximum Temperature – °F (°C)</td>
<td>95 (35)</td>
<td>95 (35)</td>
<td>95 (35)</td>
<td>95 (35)</td>
<td>95 (35)</td>
<td>95 (35)</td>
<td>95 (35)</td>
</tr>
<tr>
<td>Material (Recyclable)</td>
<td>Polyethylene</td>
<td>Polyethylene</td>
<td>Polyethylene</td>
<td>Polyethylene</td>
<td>Polyethylene</td>
<td>Polyethylene</td>
<td>Polyethylene</td>
</tr>
<tr>
<td>Weight Empty – lbs (kg)</td>
<td>13 (6)</td>
<td>22 (10)</td>
<td>26 (12)</td>
<td>59 (27)</td>
<td>79 (36)</td>
<td>154 (70)</td>
<td>214 (97)</td>
</tr>
<tr>
<td>Weight Full – lbs (kg)</td>
<td>54 (24.5)</td>
<td>172.7 (78.5)</td>
<td>206 (93.5)</td>
<td>350 (159)</td>
<td>477 (217)</td>
<td>880 (400)</td>
<td>1210 (550)</td>
</tr>
<tr>
<td>Length “A” – in (mm)</td>
<td>12.4 (316)</td>
<td>14.0 (350)</td>
<td>14.0 (350)</td>
<td>26.0 (650)</td>
<td>26.0 (650)</td>
<td>34.0 (850)</td>
<td>34.0 (850)</td>
</tr>
<tr>
<td>Width “B” – in (mm)</td>
<td>10.6 (270)</td>
<td>17.0 (433)</td>
<td>18.0 (450)</td>
<td>20.0 (500)</td>
<td>26.0 (650)</td>
<td>28.0 (700)</td>
<td>39.0 (1000)</td>
</tr>
<tr>
<td>Height “C” – in (mm)</td>
<td>33.0 (842)</td>
<td>32.0 (810)</td>
<td>32.0 (810)</td>
<td>47.0 (1195)</td>
<td>47.0 (1195)</td>
<td>60.0 (1535)</td>
<td>60.0 (1535)</td>
</tr>
</tbody>
</table>
Sullair OS Oil/Water Separator Model Selection

No Refrigerated Dryer Installed in System

<table>
<thead>
<tr>
<th>Model</th>
<th>Classification A</th>
<th>Classification B</th>
<th>Classification C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Turbine, Additive Free</td>
<td>Mineral, PAO, TMP, PE</td>
<td>Diesters, Triesters, PAG</td>
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<tr>
<td></td>
<td>cfm</td>
<td>cfm</td>
<td>cfm</td>
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<tr>
<td>OS-1</td>
<td>87</td>
<td>73</td>
<td>60</td>
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<tr>
<td>OS-16</td>
<td>138</td>
<td>117</td>
<td>95</td>
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<tr>
<td>OS-20</td>
<td>212</td>
<td>181</td>
<td>147</td>
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<td>OS-33</td>
<td>441</td>
<td>375</td>
<td>305</td>
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<tr>
<td>OS-49</td>
<td>822</td>
<td>750</td>
<td>610</td>
</tr>
<tr>
<td>OS-94</td>
<td>1174</td>
<td>1000</td>
<td>812</td>
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<td>OS-128</td>
<td>2352</td>
<td>2000</td>
<td>1626</td>
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With Refrigerated Dryer Installed in System

<table>
<thead>
<tr>
<th>Model</th>
<th>Classification A</th>
<th>Classification B</th>
<th>Classification C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Turbine, Additive Free</td>
<td>Mineral, PAO, TMP, PE</td>
<td>Diesters, Triesters, PAG</td>
</tr>
<tr>
<td></td>
<td>cfm</td>
<td>cfm</td>
<td>cfm</td>
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<tr>
<td>OS-1</td>
<td>65</td>
<td>55</td>
<td>45</td>
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<tr>
<td>OS-16</td>
<td>103</td>
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<td>71</td>
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<td>OS-20</td>
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<td>OS-33</td>
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<td>281</td>
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<td>OS-49</td>
<td>660</td>
<td>561</td>
<td>456</td>
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<tr>
<td>OS-94</td>
<td>879</td>
<td>749</td>
<td>607</td>
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<tr>
<td>OS-128</td>
<td>1761</td>
<td>1497</td>
<td>1217</td>
</tr>
</tbody>
</table>

System Conditions
Compressor Type: Rotary Screw or Vane *
Ambient Temperature at Compressor Inlet: 70°F (21°C)
Relative Humidity: 65%
Compressor Discharge Temperature: 95°F (35°C)
Refrigerated Dryer Dewpoint If Fitted: 36°F (2°C)
System Pressure: 102 psig (7 barg)
* For use with reciprocating compressors, please contact Sullair.

For conditions other than those shown, e.g. higher ambient temperatures, please consult the Correction Factor tables below, or to properly size the Separator, contact Sullair.

Correction Factor for ambient temperature at the compressor inlet in degrees F.

<table>
<thead>
<tr>
<th>Temperature °F</th>
<th>40°F</th>
<th>50°F</th>
<th>60°F</th>
<th>70°F</th>
<th>80°F</th>
<th>90°F</th>
<th>100°F</th>
<th>110°F</th>
<th>120°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature °C</td>
<td>4°C</td>
<td>10°C</td>
<td>16°C</td>
<td>21°C</td>
<td>27°C</td>
<td>32°C</td>
<td>38°C</td>
<td>43°C</td>
<td>49°C</td>
</tr>
<tr>
<td>Factor</td>
<td>2.82</td>
<td>1.96</td>
<td>1.39</td>
<td>1.00</td>
<td>0.73</td>
<td>0.54</td>
<td>0.40</td>
<td>0.31</td>
<td>0.22</td>
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</table>

Correction Factor for relative humidity of the ambient air at the compressor inlet.

<table>
<thead>
<tr>
<th>RH</th>
<th>50%</th>
<th>55%</th>
<th>60%</th>
<th>65%</th>
<th>70%</th>
<th>75%</th>
<th>80%</th>
<th>85%</th>
<th>90%</th>
<th>95%</th>
<th>100%</th>
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</thead>
<tbody>
<tr>
<td>Factor</td>
<td>1.30</td>
<td>1.18</td>
<td>1.08</td>
<td>1.00</td>
<td>0.93</td>
<td>0.87</td>
<td>0.81</td>
<td>0.76</td>
<td>0.72</td>
<td>0.68</td>
<td>0.65</td>
</tr>
</tbody>
</table>