SULLAIR
VARIABLE CAPACITY
COMPRESSORS

THE ENERGY-EFFICIENT ALTERNATIVE

VCC-200
VCC-200S

Lubricated Rotary Screw
Air Compressors

100 to 150 HP
Sullair VCC Series compressors have established themselves as outstanding in the 100 to 150 horsepower range. These compressors offer the inherent reliability of Sullair’s rotary screw design and provide continuous-duty performance. Components of every Sullair compressor have been carefully selected to assure complete reliability.

Simple, compact design

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Rotary screw reliability and variable capacity efficiency

These VCC models use a single-stage rotary screw air end, featuring Sullair’s rugged bearing design: tapered roller bearings on the discharge end and cylindrical roller bearings on the inlet, for high load-carrying capacity. On standard models, the air end is warranted for a period of 5 years\(^1\). On 24KT\(^\text{TM}\) models, the air end is warranted for 10 years\(^2\).

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\(^1\) Sullair’s 5-year warranty includes motor, air/fluid receiver and cooler(s). “L” and “H” models only.
\(^2\) Sullair’s 24KT warranty includes 5-years on the motor, air/fluid receiver and cooler(s). “L” and “H” models only.
Lower maintenance costs

As a result of Sullair’s rugged, time-proven design, the VCC Series requires only minimum maintenance for optimum performance. There are no troublesome belts or expensive bull gear arrangements to wear out or replace.

Open and enclosed models available.

valve. This system delivers greatly improved part-load performance, especially when compared with compressors having other capacity control systems.

By matching compressor displacement with output need, this energy-saving system uses up to 17 percent less power.

Best warranties in the industry

EMERALD 5-Year Warranty (Material and labor included)

24KT™ 10-Year Warranty (Material and labor included)

AIR COMPRESSORS}

ACEMENT AIR-END.
**Superior package design**

SAE O-ring fittings are standard. (VCC-200-100)
Number of fittings are reduced.
Designed for continuous duty.
Aftercooler, moisture separator and trap.
Air-cooled or water-cooled models are available.

1. **Sullair Supervisor Controller™**
   State-of-the-art technology.
   Four-line, full text display.
   Accurately monitors and controls the compressor.
   Computer-based controller allows sequencing of multiple compressors and communication capability.
   Service and preventative maintenance information built into the controller.

2. **Cooling**
Air-cooled units have updraft coolers for ease of installation and heat recovery capabilities.
Water-cooled units use shell and tube heat exchanger.

3. **Multi-stage air/fluid separation**
Dual nested Optimizer™ separator elements, reduce fluid carry-over to less than 1 ppm.
Reduced carryover lowers make-up fluid costs.

4. **Pleated Optimizer elements**
   Lower initial pressure drop for greater efficiency and extend life of the elements

4. **Fiberglass fluid filter**
Aircraft-quality media provides better filtration.
Up to 20% more efficient than conventional paper elements.
Lengthens the life of the compressor.

Open and enclosed models available.
Optimalair™ inlet filter
Includes remote air intake connection.
Protects premature failure of key components.
Extends separator, fluid filter and fluid life.

The Variable Capacity Sullair air end
Features Sullair air end and Spiral Valve
Longer average bearing life, designed for over 100,000 hours of service

Flange-mounted motor and air end
Up to 3% energy savings over belt drive.
Eliminates maintenance expense associated with V-belts.
NEMA frame design.
Provides positive alignment.
Optimizes bearing life of air end and motor.

Select one of these long-life fluids...
Sullube™ is standard factory fill.
5-year air end warranty.
Biodegradable.
One year or 8000 hour service life.
Reduces fluid disposal costs.
24KT™ is optional.
Exclusive 10-year air end warranty.
Eliminates annual fluid changes.
Eliminates annual fluid disposal costs.
Free fluid sampling and analysis program with either fluid.

Sullair’s Versatile Control System
Matches output to demand.
Stabilizes system pressure.
Minimizes need for an air receiver.
Extends package life.

Premium efficient motor
Improved energy conservation.
5-year warranty.
Direct coupled design for extended bearing life.
250,000-hour insulation life.

Bearing Fluid Reservoirs
Ensure fluid is available at startup.
Extends air end life.
Sullair Supervisor Controller™ microprocessor controller.

Compatible and user-friendly Computer-compatible microprocessor controller has simple graphic illustration of monitored functions and an easy-to-read keypad.

Featuring:
- Constant readout of pressure and temperature.
- On-demand readout of all operating and maintenance conditions.
- Monitors key functions and safety shutdowns.
- Power failure auto re-start.
- Dual control, provides automatic start-stop operation.
- Lead-lag and sequencing with multiple compressors.
- Service and preventive maintenance schedule.
- “Run”, “Loaded” and “Consumable Parts” hours.
- Fault history with sensor readings.
- “Help” key provides built-in troubleshooting.

Two-way communications RS 485 communications port allows remote input of operating parameters and output of actual readings.

Air quality is one of the best in the industry

While others claim a low carry-over or 5ppm, Sullair’s LS compressors offer a carryover rate less than 1 ppm, the lowest in the industry. Sullair’s MSS design uses a sump design, which allows use of oversized dual nested separators.

Sullair Optimizer Air/Fluid Separator
A high-efficiency separator that will pay for itself (during the life of the separator) in reduced compressor fluid carryover and electrical power consumption.
How it works

The compression volume varies to suit the air demand by progressively opening or closing internal bypass ports on the air-end.

Capacity is matched to system demand, reducing cycling time and extending component life.

Part load capacity and efficiency can produce energy savings up to 17%.

Variable Displacement Air-End

Sullair’s variable displacement air-end maintains constant system pressure to the plant. Since the VCC compressors use large, efficient, slow running rotors, a lower power consumption is achieved at the top end of capacity. Oil foaming does not occur, air is not wasted to atmosphere, and bearings last longer.

The motor and air-end run at optimum speed and therefore maintain optimum efficiency throughout the full variable output range.

Sullair VCC compressors react instantly to rapid changes in demand. The effective rotor length is progressively reduced as the demand is reduced which provides the most efficient part load control system to 50% output.

This system is extremely simple and provides a cost-effective, energy-efficient control alternative.
Variable Capacity Compressors save you power.

The compressor displacement is matched to the output need. The VCC technology assures precision operation for virtually any part-load point. It provides significant power savings at part-load conditions, compared to compressors using suction throttling, or load/no load control.

Increases capacity control efficiency.

By activating automatically when the unit is operating under partial load, and allowing the compression of only the required quantity of air, the spiral valve increases the efficiency of the compression process. The ultimate result is greater compression efficiency and reduced power consumption infinitely variable from 55 to 100% capacity.

Part-load Capacity Control Comparisons

The curve shows how a rotary screw compressor with variable displacement reduces power consumption as the compressor load drops. More importantly, it illustrates the substantial power savings at part load when compared to other capacity control systems.

- **Actual Load/No Load** *
- **Theoretical Load/No Load**
- **Suction Throttling**
- **Variable Capacity Compressor**

* Based on 1 gallon per cfm air storage.
Sullair Sullube:

**standard long-life compressor fluid**

Environmentally compatible

Sullube™ is a biodegradable fluid that is recyclable. Low levels of Sullube carried over in condensate may be accepted for direct sewer disposal without additional separation/equipment. Contact local authorities for approval.

8,000-hour fluid

Because Sullube can operate for three full shifts for one year, labor related to fluid change-out and associated downtime costs during this time are virtually eliminated.

Non-varnishing

Because of its unique chemical formulation, Sullube will not varnish.

Longer fluid life

Unique additive package maintains desired characteristics over a wide range of operating conditions for extended periods.

Sullair 24KT™ compressor fluid and the 10-year warranty

24KT fluid formulation is so revolutionary, Sullair is the only compressor manufacturer to offer this unprecedented warranty. Sullair’s 24KT warranty includes 5-years on the motor, air/fluid receiver and cooler(s).

Routine fluid disposal costs are eliminated

There is no foreseeable end to the useful life of 24KT fluid, when used according to Sullair recommendations. Fluid-related maintenance costs are drastically reduced.

24KT Fluid extends compressor component life

24KT is chemically inert and does not break down or varnish. It works clean. Filters, separators and coolers will not plug. Bearings last longer. Associated labor costs are also reduced.

Compressor operates at peak performance

Constant viscosity insures excellent lubrication to all rotating parts.
# Standard features and options

<table>
<thead>
<tr>
<th></th>
<th>VCC-200/100 HP</th>
<th>VCC-200S/125-150 HP</th>
</tr>
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<tbody>
<tr>
<td>Sullair Supervisor Controller</td>
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<tr>
<td>Direct Coupled</td>
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<td>Emerald 5-year Health Assurance(1)</td>
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<td>24KT (10-Year Air End Warranty)(2)</td>
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<td>Sullair’s Versatile Control System</td>
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<td>SCD Zero Air Loss Condensate Drain</td>
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<td>Energy Efficiency System</td>
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● = Standard  ● = Option

(1) Sullair’s 5-year warranty includes air end, motor, air/fluid receiver and cooler(s). “L” and “H” models only.

(2) Sullair’s 24KT warranty includes 5-years on the motor, air/fluid receiver and cooler(s). “L” and “H” models only.

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# Specifications

## VCC-200

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<tr>
<th>Compressor Performance</th>
<th>100L</th>
<th>100H</th>
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<tbody>
<tr>
<td>Full Load Pressure (psig)</td>
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<tr>
<td>Capacity (acfm)</td>
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<td>Motor (hp)</td>
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<th>Dimensions and Weights, Enclosure-Air-Cooled</th>
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## VCC-200S

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<th>125XH*</th>
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<th>150H</th>
<th>150HH*</th>
<th>150XH*</th>
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<td>Full Load Pressure (psig)</td>
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<td>Capacity (acfm)</td>
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<td>Motor (hp)</td>
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<th>Dimensions and Weights, Enclosure-Air-Cooled</th>
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* “HH and XH” Models not available with 24KT.