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**SULLAIR  
VARIABLE CAPACITY  
COMPRESSORS**

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# **THE ENERGY-EFFICIENT ALTERNATIVE**

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**VCC-200**

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**VCC-200S**

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**Lubricated Rotary Screw  
Air Compressors**

**100 to 150 HP**

 **SULLAIR®**

# SULLAIR VCC SERIES A WITH VARIABLE DISPL

## ■ Simple, compact design

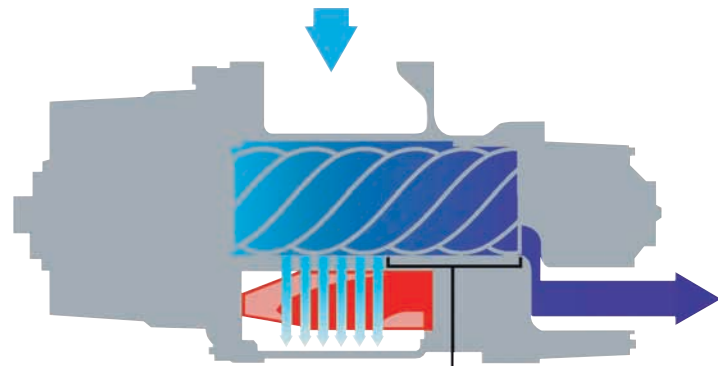
Sullair VCC Series compressors have established themselves as outstanding in the 100 to 150 horsepower range. These compressors offer the inherent reliability of Sullair's rotary screw design and provide continuous-duty performance. Components of every Sullair compressor have been carefully selected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

## ■ 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**<sup>(1)</sup>. On 24KT™ models, the air end is warranted for **10 years**<sup>(2)</sup>.

(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.



Sullair's simple and reliable capacity control system consists of a proven spiral valve and an inlet butterfly



# AIR COMPRESSORS CEMENT AIR-END.



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)

## ■ 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.

# THE SULLAIR VCC-2

## 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.

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.

# 200 AND VCC-200S.

## 5 **Optimalair™ inlet filter**

Includes remote air intake connection.

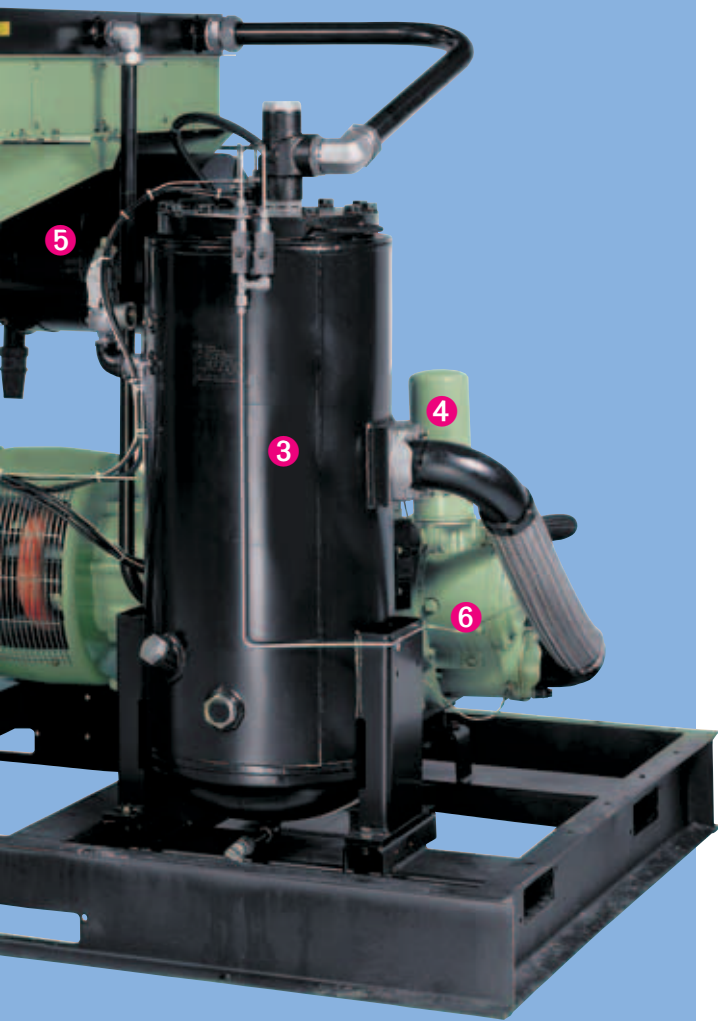
Protects premature failure of key components.

Extends separator, fluid filter and fluid life.

## 6 **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™ micro-processor controller.

Compatible and user-friendly Computer-compatible micro-processor 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.

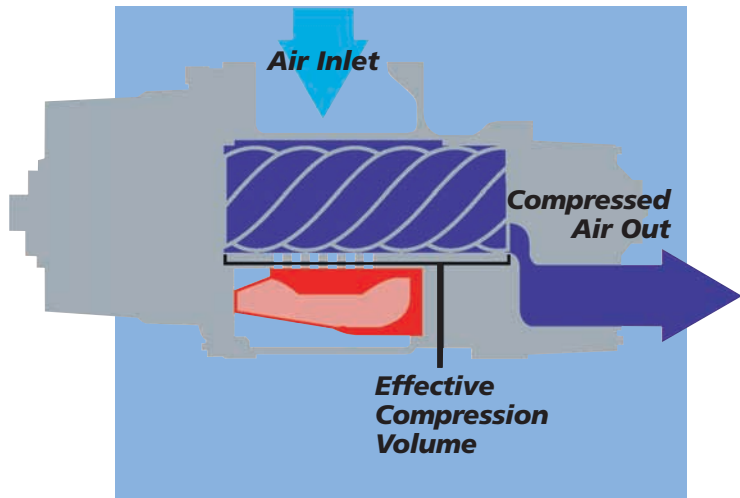
### Sullair Optimizer Air/Fluid Separator

A high-efficiency separator that will pay for itself (during the life of the separator) in reduced compressor fluid carryover and electrical power consumption.

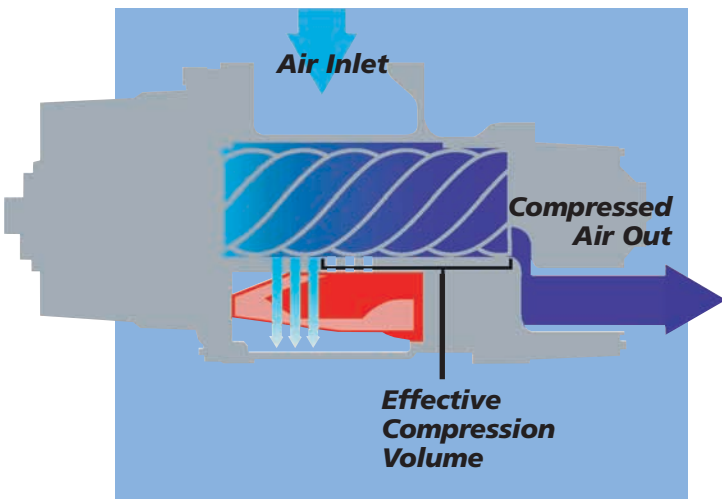




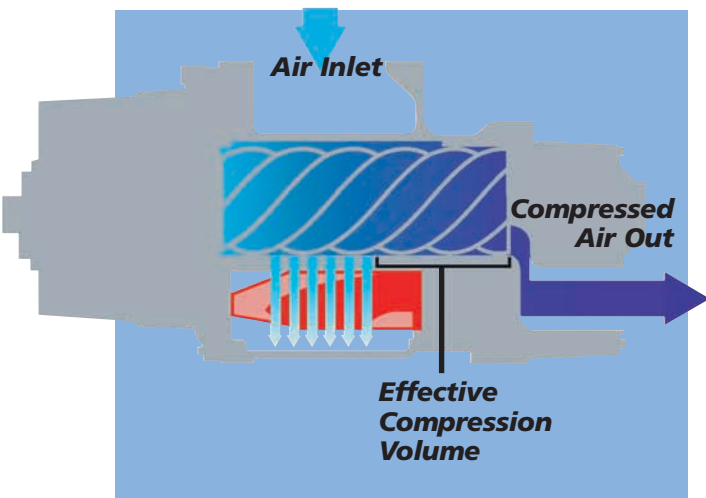
# THE SULLAIR VARIABLE DISPLACEMENT AIR-END CUTS ENERGY COSTS D



**Closed Bypass Ports**



**Partially Open Bypass Ports**



**Open Bypass Ports**

## 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.

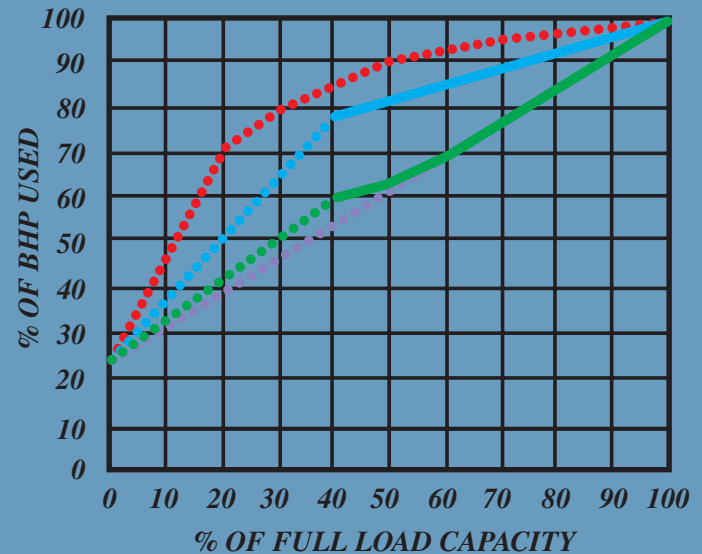
# THE CAPACITY AIR END DRAMATICALLY.

## 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

	VCC-200/100 HP	VCC-200S/125-150 HP
Sullair Supervisor Controller	●	●
Direct Coupled	●	●
Highly Efficient Air/Fluid Separation	●	●
Fiberglass Fluid Filter	●	●
Heavy Duty Intake Filter	●	●
Sullube 8000 Hour Compressor Fluid	●	●
Food Grade Compressor Fluid	●	●
Optimizer Separator	●	●
Bearing Fluid Reservoir	●	●
Wye Delta Starter	●	●
Solid State Starter	●	●
Full Voltage Starter	●	●
ODP Premium Efficiency Motor	●	●
TEFC Premium Efficiency Motor	●	●
Totally Enclosed Fan Motor	●	●
Emerald 5-year Health Assurance <sup>(1)</sup>	●	●
24KT (10-Year Air End Warranty) <sup>(2)</sup>	●	●
Sound Attenuating Enclosure	●	●
Sullair's Versatile Control System	●	●
Cold Weather Package	●	●
SCD Zero Air Loss Condensate Drain	●	●
Energy Efficiency System	●	●

● = Standard   ● = Option

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

## Specifications

VCC-200	100L	100H
<b>Compressor Performance</b>		
Full Load Pressure (psig)	100	125
Capacity (acfm)	511	468
Motor (hp)	100	100
<b>Dimensions and Weights, Enclosure-Air-Cooled</b>		
Length (in)	88	88
Width (in)	48	48
Height (in)	61.5	61.5
Weight (lb)	4250	4250

VCC-200S	125L	125H	125HH*	125XH*	150L	150H	150HH*	150XH*
<b>Compressor Performance</b>								
Full Load Pressure (psig)	100	125	150	175	100	125	150	175
Capacity (acfm)	647	587	506	457	752	683	631	570
Motor (hp)	125	125	125	125	150	150	150	150
<b>Dimensions and Weights, Enclosure-Air-Cooled</b>								
Length (in)	100	100	100	100	100	100	100	100
Width (in)	60	60	60	60	60	60	60	60
Height (in)	68	68	68	68	68	68	68	68
Weight (lb.)	5250	5250	5250	5250	5570	5570	5570	5570

\*"HH and XH" Models not available with 24KT.



Sullair is pleased to be ISO 9001 certified by Lloyd's Register Quality Company



www.sullair.com

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