

# Oil-Free Rotary Screw Air Compressors

75-150 kW ■ 100-200 Horsepower



- Quality oil-free air
- Proven Sullair reliability
- Energy efficient
- Minimal maintenance

  
**SULLAIR**<sup>®</sup>  
Always air. Always there.™

# 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.



# Sullair Stationary Air Power Systems

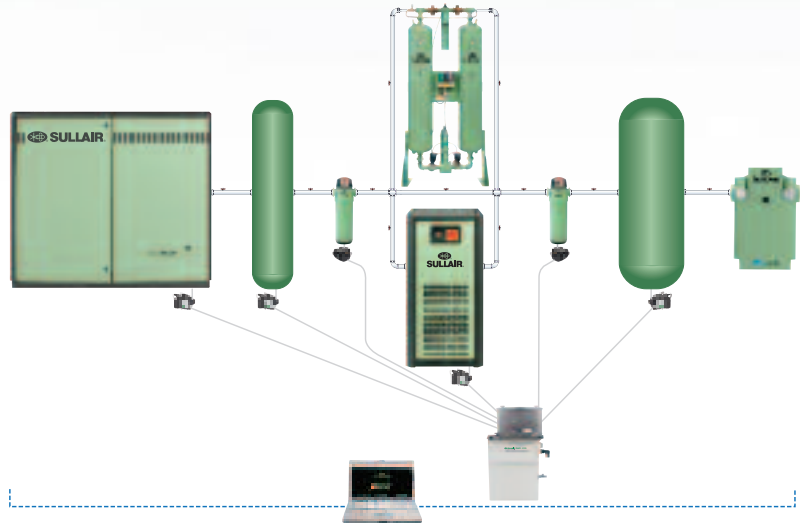
Sullair offers total compressed air systems to help compressed air users reduce energy costs and improve productivity by analyzing, managing and controlling their compressed air systems.

Sullair's air systems include: plant air audits, energy efficient products, compressed air system controls, equipment to monitor and manage systems, air distribution products, and after-purchase support.

Each component of the system is carefully matched for capacity and pressure to provide maximum performance and energy efficiency. A total Sullair system provides the user with an air quality guarantee.

## This System includes:

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



## Oil-Free Compression and Rotary Screw Dependability

### Sullair Reliability

The Sullair reputation for designing and delivering quality products lives on through the DS oil-free offering. The DS has a proven track record of installations in various industries that require a reliable machine that can deliver quality oil-free air for the most critical processes.

### Oil-Free Compression

The Sullair oil-free compressor provides critical quality oil-free air for sensitive applications like food and beverage, pharmaceutical, chemical, textile and electronics production.

### No Contaminating Particles

The industry leading Optimalair™ inlet air filter exclusively from Sullair prevents contamination from entering

the machine and the contamination is avoided internally by utilizing timing gears which prevents rotor contact. By preventing rotor contact the risk of creating particles that could enter the air stream is completely avoided.

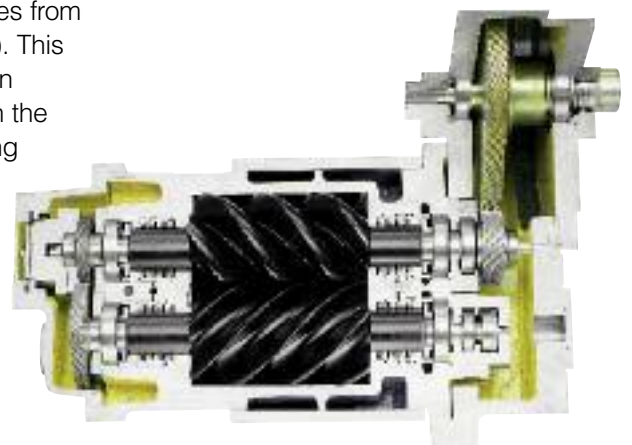
### Flexible Product Range

The DS oil-free compressors comprise a range of flows and pressures from 100 to 200 hp (75 to 150 kW). This two-stage rotary screw design features intercooling between the stages for increased operating efficiency. Air- or water-cooled models are available.

### Sullair Keeps It Simple

The rotary screw mechanism is the simplest method of

compressing air. In developing the DS Series, Sullair utilized over 40 years of experience and expertise in lubricated rotary screws and applied it to oil-free compressors. The result is a compressor that's easy to operate and maintain, because Sullair rotary screw simplicity is built in.





# Exceptional Design and Rotary Screw Expertise Come Together in Sullair Oil-Free Compressors

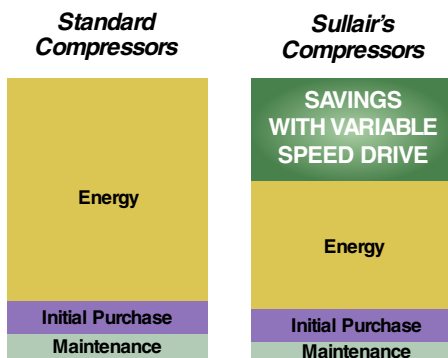
## For the Maximum Energy Efficiency and Operating Consistency, Sullair Air Compressors with VSD

### The Sullair Compressors with VSD Provide:

- Excellent energy savings
- Relief from potential peak demand charges
- Possible utility company rebate
- DC link choke or 3% line reactor included (model/voltage specific)
- Stable system pressure
- Consistent product quality
- Reduced system air leaks
- Reduced storage requirements
- Flexibility for future growth
- Lowest five-year life cycle cost

### Your Compressed Air System Can Improve Your Bottom Line: 35% Energy Savings in the First Five Years

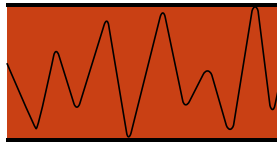
In just five years, the electrical power cost to operate a standard compressor can be more than six times greater than its purchase price.



### Stable System Pressure Improves the Consistency of Your Process to Reduce Product Rejects

- Lowers air system leaks
- Reduces system storage requirements
- Provides increased energy savings to increase profits

Standard Compressors



Sullair's VSD Compressors



### Soft Start is Standard with Unlimited Starts and Stops

- No need for Wye Delta and other soft starters
- No need to control the number of hot or cold starts
- Unlimited starts and stops save electrical costs
- Avoids high electrical current at start-up

VSD compressors provide the highest power factor over the entire frequency range, often avoiding utility company penalties.

### Sullair Supervisor II Microprocessor

This state-of-the-art microprocessor has a simple graphical illustration of the monitored functions and an easy-to-use keypad.

- Precisely monitors load/unload control
- Phase monitor relay protects the unit from poor quality electricity
- Power failure restart mechanism will restart the machine in the event of a power failure or can be disabled
- Choice of languages and numerical units. Select English, Spanish, German, French or Italian languages and metric or English units
- Malfunction alert: Operator is alerted to malfunction by an alarm and flashing indicators, showing first out indication of the initial problem
- Stop/Reset key: This built-in safeguard prevents accidental starting
- Two-way communications: RS 485 communications port allows for remote input of desired operating parameters and output of actual readings



- Built-in sequencing capabilities for automatic load sharing
- Accurately monitors and controls the compressor
- Constantly displays essential functions

### Minimal Maintenance

- No interim intervention required
- Annual maintenance only

### Stainless Steel Control Tubing

- Highly resistant to corrosion
- Extends component life

### Total Compressor Flexibility

Sullair's VSD compressors provides the flexibility to vary both capacity and pressure. This flexibility makes it possible to "grow" your air system without adding more compressors.



↑ FOR TODAY, ↑ TOMORROW, ↑ AND THE FUTURE

### Three Stage Intake Filter

- Provides superior filtration
- 99.9% efficient per SAE J726 (Society of Automotive Engineers)



### Sullair Optimalair™ Air Filter

- Provides the finest inlet filtration in the industry (.4 micron)
- Keeps intake clean and extends life of internal components
- Reduces pressure drop during operating life, resulting in energy savings

### Enclosure with Removable Panels

- Quick-release panels for easy maintenance
- Multi-layer foam insulation reduces noise levels to 78 dBA
- Enhanced package appearance

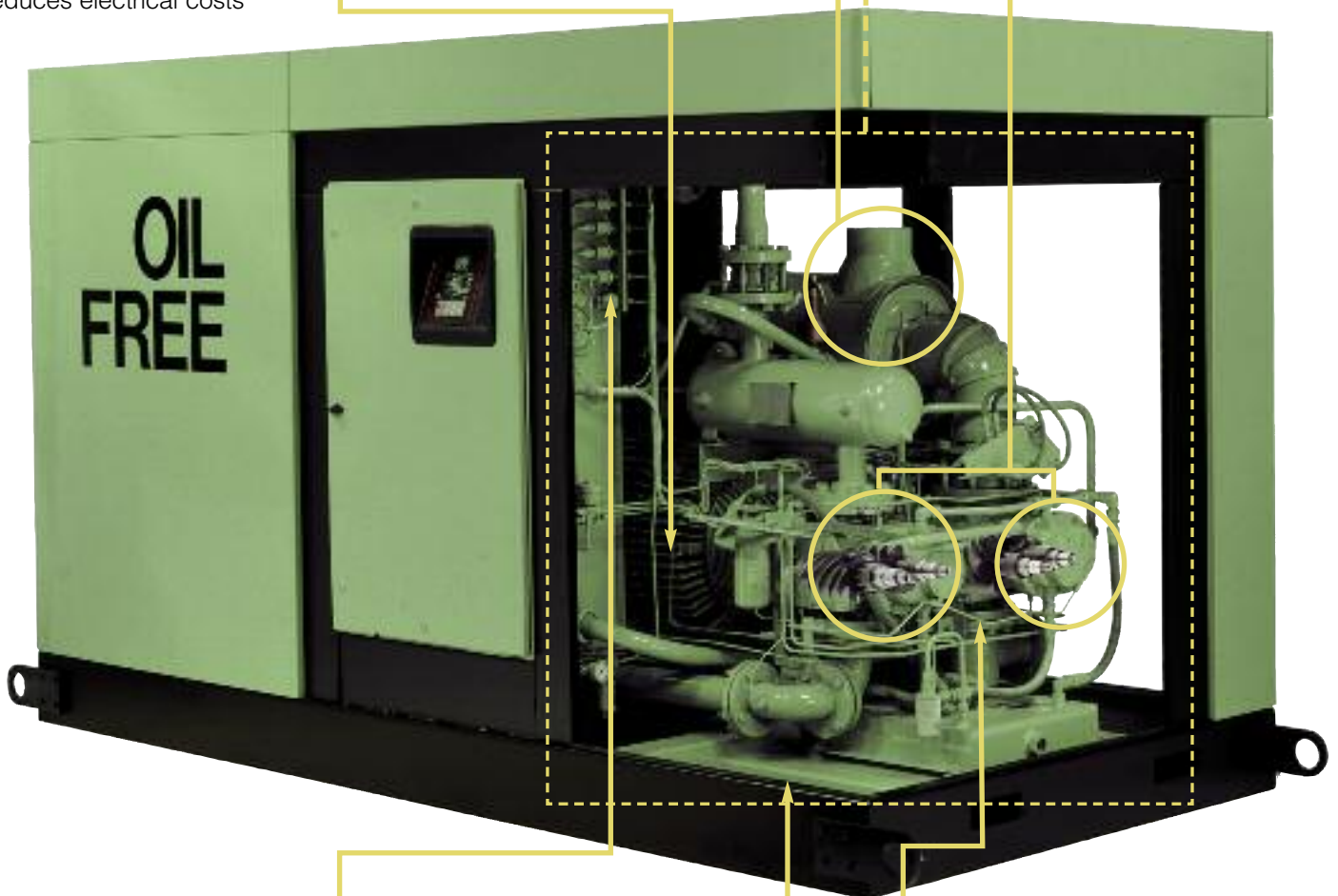
### The Two-Stage Air End

- AGMA 12 precision drive gears are designed to extend air end life
- Carbon ring seals ensure sealing without damage to the shaft
- Sullair's exclusive five-year air end warranty



### Premium Efficiency Motor

- Exceeds EPACT (Energy Policy Act) 1997 standard
- Reduces electrical costs



### NEMA 4 Panel\*

- Extends component life by protecting from surrounding elements like water and debris
- \*NEMA 12 on VSD

**Vibration isolation mounts under the motor and compressor provides vibration-free operation.**

### First- and Second-Stage Silencer/Dampers

- Reduce noise and flow pulsations
- Protect compressor and system

# Built-In Features Provide Important Benefits

## Separate, Easy-to-Adjust Valves

The DS oil-free compressor has separate inlet and blow down valves of simple, rugged design for easy adjustment and maintenance. These individual valves, unlike some integral designs, do not use critical pressure balancing holes that could clog and malfunction. In the unlikely event of valve damage, replacement is easy and inexpensive, since these valves are separate assemblies. No expensive repair kits are required.



## Reliable Rotary Screw Air End

The compressor air end is designed and built by Sullair, a manufacturer that has specialized in rotary screw technology since 1965. Sullair has been delivering oil-free machines since 1981.

The rotor assembly is the heart of any screw compressor. For its screw compressors, Sullair has designed extremely heavy-duty rotors. Using bearings with an L10 life of over 100,000 hours, the Sullair DS compressor is one of the most rugged oil-free designs.



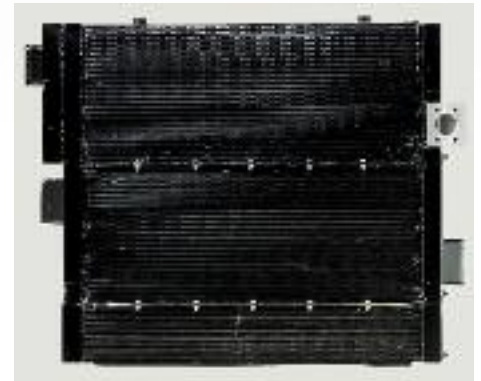
Rotors and rotor housings are precision coated to inhibit corrosion and prohibit contamination. The coating is approved by the U.S. Food and Drug Administration as a food-grade PTFE, to ensure contaminant-free conditions.

Vibration monitoring for predictive maintenance. Precision ground accelerometer connections allow customers to monitor air end bearing condition and predict compressor maintenance needs.

Proven reliability, backed by a five-year air end warranty.

## Choice of Air-Cooled or Water-Cooled Models

The DS oil-free compressor is available with either air-cooling or water-cooling. The air-cooled model uses high efficiency modular fin and tube aluminum heat exchangers. If damaged, each section can be



replaced individually to reduce maintenance costs. The water-cooled model uses non-proprietary shell and tube heat exchangers which are interchangeable on the first and second stage. Stainless steel cooler tubes are standard for greater corrosion resistance.



# Technical Specifications

60Hz Motor Performance DA-13			Air-Cooled Full-Load Capacity										
Model	Motor		acfm	m <sup>3</sup> /min	acfm	m <sup>3</sup> /min	acfm	m <sup>3</sup> /min	Weight		Discharge Connection	dBA Rating**	Moisture Drain Connection
	hp	kW	@100 psig	6.8 bar	@125 psig	8.6 bar	@150 psig	10.3 bar	lbs	kg			
DA-13 100	100	75	430	12.2	428	12.1	-	-	6780	3075	2" NPT	78	1/4" NPT
DA-13 125	125	93	518	14.6	533	15.0	427	12.0	7016	3182	2" NPT	78	1/4" NPT
DA-13 150	150	112	641	18.1	640	18.1	517	14.6	7150	3243	2" NPT	78	1/4" NPT
DA-13 200	200	149	785	22.2	785	22.2	639	18.0	7396	3354	2" NPT	78	1/4" NPT

60Hz Motor Performance DA-13			Water-Cooled Full-Load Capacity										
Model	Motor		acfm	m <sup>3</sup> /min	acfm	m <sup>3</sup> /min	acfm	m <sup>3</sup> /min	Weight		Discharge Connection	dBA Rating**	Moisture Drain Connection
	hp	kW	@100 psig	6.8 bar	@125 psig	8.6 bar	@150 psig	10.3 bar	lbs	kg			
DA-13 100	100	75	448	12.6	447	12.6	-	-	6643	3013	2" NPT	78	1/4" NPT
DA-13 125	125	93	534	15.1	533	15.6	546	15.4	6880	3121	2" NPT	78	1/4" NPT
DA-13 150	150	112	655	18.5	655	18.5	532	15.0	7010	3179	2" NPT	78	1/4" NPT
DA-13 200	200	149	801	22.6	801	22.6	654	18.5	7260	3293	2" NPT	78	1/4" NPT

50Hz Motor Performance DA-13			Air-Cooled Full-Load Capacity							
Model	Motor		m <sup>3</sup> /min	m <sup>3</sup> /min	m <sup>3</sup> /min	Weight		Discharge Connection	dBA Rating**	Moisture Drain Connection
	kW	hp	7 bar	8.5 bar	10.3 bar	kg	lbs			
DA-13 100	75	100	11.9	11.8	9.5	3075	6780	2" NPT	78	1/4" NPT
DA-13 125	90	125	14.8	14.8	11.8	3182	7016	2" NPT	78	1/4" NPT
DA-13 150	110	150	18.3	18.3	14.8	3243	7150	2" NPT	78	1/4" NPT
DA-13 200	132	200	-	-	18.3	3354	7396	2" NPT	78	1/4" NPT

50Hz Motor Performance DA-13			Water-Cooled Full-Load Capacity							
Model	Motor		m <sup>3</sup> /min	m <sup>3</sup> /min	m <sup>3</sup> /min	Weight		Discharge Connection	dBA Rating**	Moisture Drain Connection
	kW	hp	7 bar	8.5 bar	10.3 bar	kg	lbs			
DA-13 100	75	100	12.3	12.3	10.1	3013	6643	2" NPT	78	1/4" NPT
DA-13 125	90	125	15.3	15.3	12.3	3121	6880	2" NPT	78	1/4" NPT
DA-13 150	110	150	18.8	18.8	15.3	3179	7010	2" NPT	78	1/4" NPT
DA-13 200	132	200	-	-	18.8	3293	7260	2" NPT	78	1/4" NPT

Dimensions Models	Length		Width		Height	
	in	mm	in	mm	in	mm
DA-13 100, DA-13 125, DA-13 150, DA-13, 200	136	3454	65	1651	78	1981

\* Consult factory for VSD Packages.

\*\*At 1 meter.

Capacity per CAGI / PNEUROP PN2CPTC2 (Annex C to ISO 1217)

Data subject to change without notice.



# 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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