

S-energy®



Lubricated Rotary Screw Air Compressors

Constant Speed and Variable Speed Drives
30-75 kW/40-100 hp

 **SULLAIR®**
Always air. Always there.®



Sullair: An Industry Leader

SULLAIR LEADERSHIP

Since 1965, Sullair has been recognized worldwide as an innovator and leader in rotary screw compression and vacuum technology. Sullair designs and manufactures its own rotors and air end assemblies. The award-winning rotary screw design sets the industry standard and delivers the quality and reliability you expect from a leader.

SULLAIR TECHNOLOGY

Using 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 COMMITMENT TO INNOVATION

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

All rotors are engineered and machined in the USA.

S-energy® Compressors

EFFICIENCY

High performance with low energy usage. That's S-energy® efficiency - achieved by combining carefully-selected high efficiency components.

DURABILITY

Sullair builds compressors to last. Key to S-energy durability and long-lasting performance: the legendary and proven Sullair air end, a robust 3G enclosure, high quality craftsmanship and a precisely engineered design to tie it all together.

RELIABILITY

Compressors are key to your operation running smoothly. S-energy's reliable performance helps ensure maximum uptime - and maximum confidence.

SERVICEABILITY

Lift-off panels. Oil sampling valve. Tilt and slide oil/aftercooler. Integrated moisture separator. S-energy's package has been designed to make servicing quick and easy.

INNOVATION

Sullair continuously explores new ideas and technologies for better, more energy efficient compressed air solutions.



S-energy®



Sullair has enhanced our flagship S-energy® 40-100 hp compressors. S-energy units feature the same robust, globally recognized air end with the same highly efficient asymmetric profile and tapered roller bearings – backed by the Sullair comprehensive 10-year Diamond Warranty.



S-energy 40-100 hp compressors include:

- 3G enclosure design with lift-off panels for easy maintenance
- Improved air/oil separator design
- Oversized oil/aftercooler with higher cooling capacities (46°C/115°F)
- Efficient centrifugal fan and housing
- WS Controller™ with enhanced functionality
- Easy access oil sampling valve
- Factory filled with 10,000-hour Genuine Sullube®
- NEMA 4 starter cabinet (fixed speed and Wye-Delta models)

S-energy compressors can significantly reduce operating and energy costs over the entire compressor life cycle:

- Proven air end with the low-restriction inlet valve
- Premium efficient drive motor design
- Low-pressure-drop air-fluid separation system to prevent energy loss

Sullair delivers cost savings for the life of the product. Improved air filtration translates into:

- Extended separator life
- Improved fluid filter life
- Less lubricant contamination

The SULLAIR® Advantage

S-energy®

STANDARD FEATURES

- Legendary air end
- Low-restriction inlet valve
- Low carryover air/oil separator design
- High efficiency drive and fan motor
- Integral compressor sequencing
- NEMA 4 starter cabinet (fixed speed and Wye-Delta models)
- WS microprocessor
- Compact footprint
- Genuine Sullube® 10,000-hour, non-varnishing, biodegradable compressor fluid
- Optimalair® air filter providing 10 times better filtration than other filters
- Variable Capacity Control (VCC) technology (available only on 4500 PSB-7500 PSB models)





QUIET DESIGN

- Air end, motor, and receiver tank mounted on rubber isolators
- Insulated intake and exhaust louvers
- Low-noise fan



OPTIONS

- Choice of air- or water-cooled
- Cold-weather package
- Weather hood
- TEFC motors
- EES® heat recovery system
- VSD starter
- Magnetic air inlet filters (standard on VSD)
- High ambient package (55° C, 131° F)
- PristineFG™ food grade compressor fluid
- Oil containment pan (ships loose)



S-energy® 40-100 hp Compressors

SULLAIR OPTIMALAIR® AIR FILTER

- Provides industry's finest inlet filtration
- Keeps fluid clean and extends internal component life
- Reduced pressure drop during operating life results in energy savings
- 99.95%+ overall efficiency/0.4 micron



VARIABLE SPEED DRIVE

- Robust, reliable and compact
- Maximum efficiency
- Operating consistency



AFTERCooler/OIL COOLER

- Oversized two-piece design eliminates thermal shock
- Integrated moisture separator
- Rated at 46°C/115°F



3700VB MO

DRIVE COUPLING ELEMENT

- Easy access allows change without disturbing hubs
- Designed for package protection

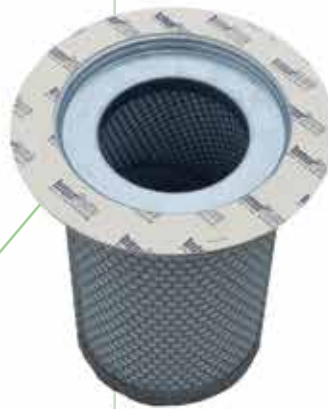


LEGENDARY SULLAIR AIR END

- Asymmetrical rotors made in the USA
- Durable
- Proven bearing design
- Backed by 10-year Diamond Warranty

SULLAIR OPTIMIZER™ AIR-FLUID SEPARATOR

- High-efficiency media
- Low pressure drop for reduced power consumption
- Less than 1.5 ppm carryover to reduce make-up fluid



OIL SAMPLING VALVE

- Easy push button, metered valve allows for sampling while machine is in operation
- Simplifies maintaining your Diamond Warranty

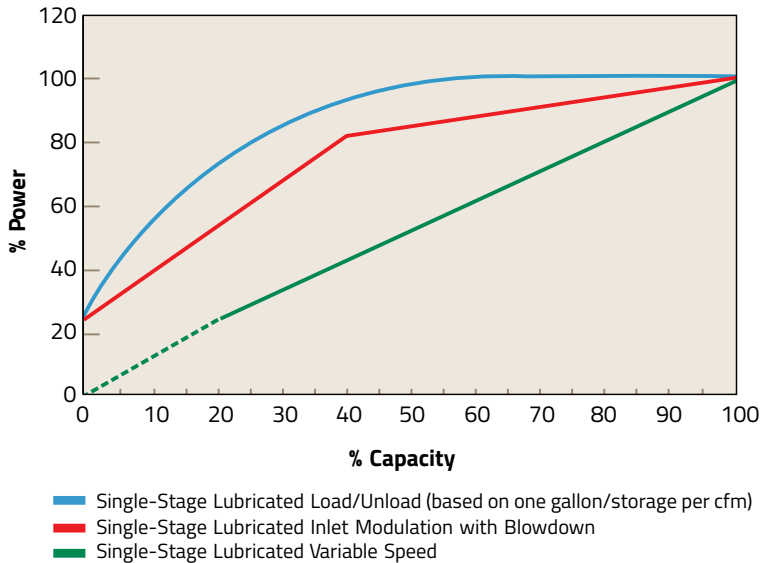


DEL SHOWN



Air Compressors with VSD

PART-LOAD PERFORMANCE ASSESSMENT



Reference: Compressed Air and Gas Handbook, 6th Edition, pages 221-223.

The chart above is a representation of nominal control systems for generic comparative purposes. A detailed and accurate comparison of specific compressor models is available from your authorized distributor.

FOR MAXIMUM ENERGY EFFICIENCY AND OPERATING CONSISTENCY

Sullair Compressors with VSD Provide:

- Excellent energy savings
- Relief from potential peak demand charges
- Possible utility company rebates
- Stable system pressure
- Consistent product quality
- Reduced system air leaks
- Reduced storage requirements
- Flexibility for future growth
- Lowest life-cycle cost
- DC link choke

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.

Total compressor flexibility

Sullair VSD compressors provide flexibility to vary both capacity and pressure. This allows you to "grow" your air system without adding more 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

HOW THE SPIRAL VALVE OPERATION 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%.

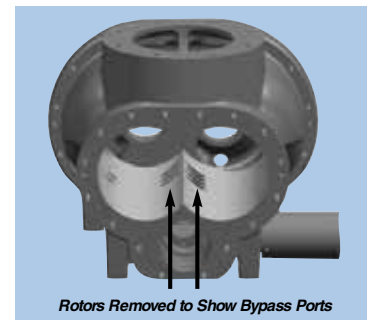
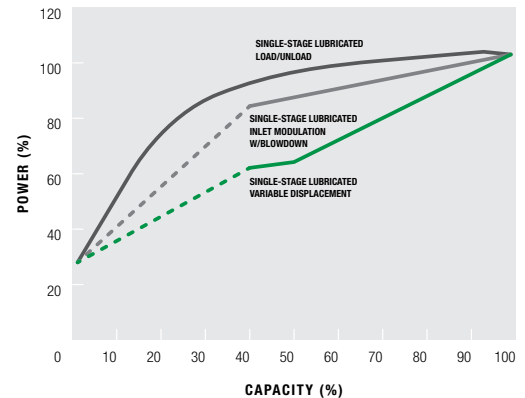
VARIABLE DISPLACEMENT AIR END

The Sullair variable displacement air end maintains system pressure to the plant to match air demand. 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 quickly 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.

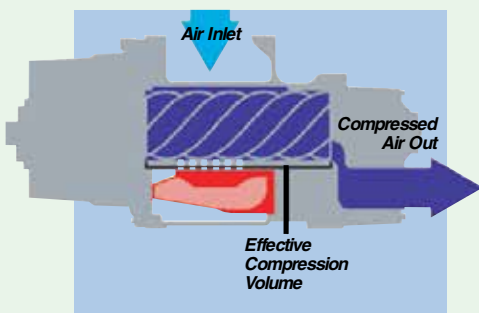
PART LOAD PERFORMANCE ASSESSMENT



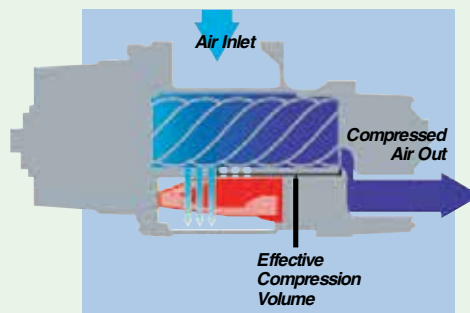
Rotors Removed to Show Bypass Ports

BYPASS PORTS IN STATOR

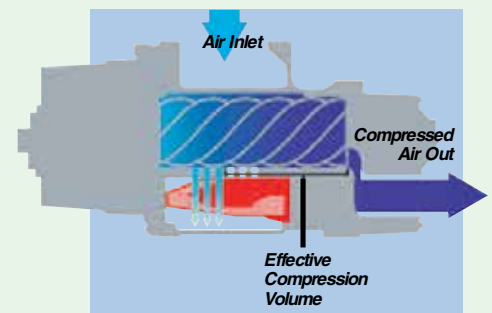
CLOSED BYPASS PORTS



PARTIALLY OPEN BYPASS PORTS



OPEN BYPASS PORTS





CRITICAL OPERATIONS INFORMATION AT YOUR FINGERTIPS

The WS Controller is a user-friendly, reliable and easy-to-read microprocessor. This controller monitors all functions and parameters to ensure your compressor is operating properly and efficiently.

WS Controller with enhanced functions include:

- Easy to read backlit display
- Simple user interface
- Multiple language display
- Web-enabled communication and control
- Machine sequencing of up to 16 Sullair compressors without any additional hardware
- Local or remote adjustable parameters
- Powerful WSPC Windows-based program provides complete monitoring and control of WS controlled air compressors
- Direct connections for ModBus RTU and Ethernet
- Supports wireless communication
- Second stop delay - minimizes unloaded energy consumption while assuring long motor life
- Built-in web screen displays of compressor operation, control, and VSD usage

Your Diamond Decade Starts Today



10-YEAR DIAMOND WARRANTY

Confirming the Sullair rugged design and commitment to customer satisfaction, all new lubricated stationary air compressors (with discharge pressures up to 150 psig) include comprehensive extended warranty coverage. This comprehensive warranty includes parts and labor covering:

10 years air end protection

5 years coverage on:

- Main motor
- Aftercooler
- Oil cooler
- Separator vessel
- Variable speed drive (if equipped)



To reduce fluid disposal costs, S-energy® compressors are factory-filled with biodegradable Genuine Sullube® 10,000-hour fluid.

- Protects and cleans (no varnish)
- Controls operating temperatures
- Optimal viscosity
- Environmentally friendly
- Reduces fluid loss
- High flash point (505°F/263°C)





Stationary Air Power Systems

With our expertise in analyzing, managing and controlling compressed air, Sullair offers total compressed air solutions that help you reduce energy costs and improve productivity.

- Plant air audits
- Energy efficient products
- Compressed air system controls
- Equipment to monitor and manage air systems
- Air distribution products
- After-purchase support

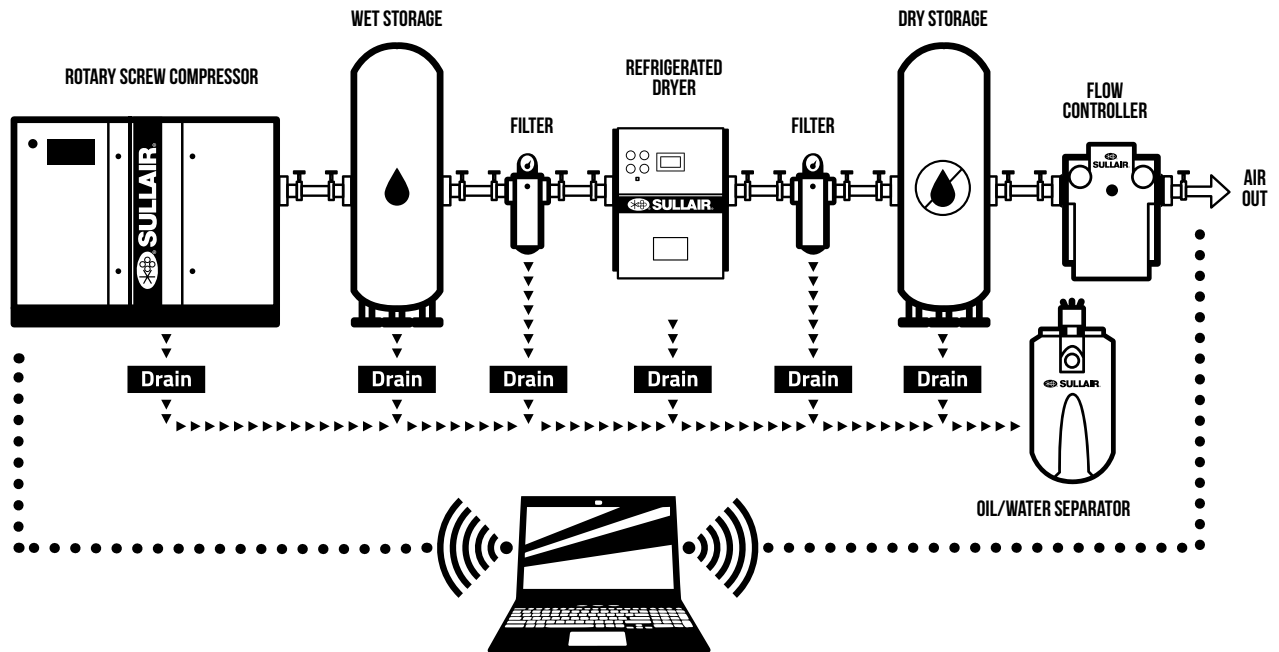
Plus a full complement of OEM parts and lubricants to help keep your compressors running optimally.

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



60HZ MOTOR FREQUENCY			FULL LOAD CAPACITIES						
Model	Motor		100 PSI acfm	7 bar m ³ /min	125 PSI acfm	9 bar m ³ /min	150 PSI acfm	10 bar m ³ /min	175 PSI acfm
	hp	kW							
3000PB	40	30	200	5.66	183	5.18	166	4.70	-
3000PVB	40	30	200	5.66	180	5.10	163	4.62	-
3700B	50	37	251	7.11	227	6.43	197	5.58	180
3700VB	50	37	249	7.05	225	6.37	202	5.72	183
4500B	60	45	-	-	269	7.62	248	7.03	221
4500VB	60	45	-	-	260	7.36	238	6.74	222
4500PVB	60	45	305	8.64	269	7.62	-	-	-
4500PSB	60	45	310	8.78	276	7.82	-	-	-
5500B	75	55	377	10.68	344	9.74	297	8.41	277
5500VB	75	55	377	10.68	341	9.66	306	8.66	278
5500PSB	75	55	387	10.96	354	10.02	-	-	-
7500B	100	75	490	13.88	444	12.57	398	11.27	370
7500VB	100	75	493	13.96	454	12.86	415	11.75	381
7500PVB	100	75	500	14.16	457	12.94	420	11.89	394
7500PSB	100	75	500	14.16	457	12.94	418	11.84	371

Example Stationary Air Power System Configuration



	WEIGHT (ODP)		DISCHARGE CONNECT	DIMENSIONS			SOUND LEVEL
	lbs	kg	inches	L in (mm)	W in (mm)	H in (mm)	dBA
12 bar m ³ /min							
-	2055	932	1-1/2" NPT	67 (1712)	35 (108)	62 (1564)	68-71
-	1996	916	1-1/2" NPT				
5.10	2080	943	1-1/2" NPT				
5.18	2030	921	1-1/2" NPT				
6.26	2366	1073	1-1/2" NPT				
6.29	2343	1063	1-1/2" NPT				
-	3323	1507	2" NPT	87.5 (2223)	43.4 (1103)	68.5 (1740)	70-73
-	3367	1527	2" NPT				
7.84	3248	1473	2" NPT				
7.87	3346	1518	2" NPT				
-	3390	1538	2" NPT				
10.48	3476	1577	2" NPT				
10.79	3587	1627	2" NPT				
11.16	3729	1691	2" NPT				
10.51	3618	1641	2" NPT				

Learn more about **S-energy**®

CONTACT YOUR  **SULLAIR**® DISTRIBUTOR TODAY

