LS SERIES

Oil-Flooded Rotary Screw Air Compressors

125–150 hp ▪ 90–110 kW

110/125/150/175 PSI ▪ 7.6/8.6/10.3/12 bar
For more than 50 years, Sullair has built a reputation of durability. Put simply — Sullair compressors last.

And now, Sullair introduces the new LS Series of lubricated rotary screw compressors. These machines combine our heritage of durability and reliability, while adding unprecedented ease of use and performance benefits.
- steel mills
- tire plants
- automotive
- forging plants
- chemical processing
- paper industry
- large manufacturing facilities
PRECISION PERFORMANCE

World-class efficiency
Less energy to power your compressors means more savings

- **NEW!** Patent-pending Sullair air end: Designed to be the most efficient Sullair air end ever
- **NEW!** Sullair Electronic Spiral Valve Technology: Proven Sullair Spiral Valve performance now with more precision and control to match capacity to system demand. *(standard on most units)*
- **Variable Speed Drive:** Provides maximum energy efficiency and operating consistency by adjusting the speed of the motor to match compressed air supply needed. *(Optional feature)*

Ease of use
Easier and more intuitive operating and servicing

- **NEW!** 10” Sullair Touch Screen Controller (STS): provides easy access to all key compressor performance parameters
- **NEW!** AirLinx™ Remote Connectivity: Remote monitoring of compressor functions is fast and easy from any connected device: computer, tablet or phone
- Enclosed unit features easily removable hinged door panels for streamlined service and maintenance

Legendary Sullair durability
Expect more uptime, for a longer time

- **NEW!** Patent-pending air end has a simplified design, with the same bulletproof quality we’ve been producing for decades
- **NEW!** Standard TEFC motor offers increased protection against weather, dirt and moisture
- Slow running 1800 rpm motor provides longer life compared to faster rpm motors
- World-class components help ensure long life even under extreme operating conditions
- **NEW!** Standard full base frame, which helps keep dirt and dust out of the unit
Sullair has more than five decades with rotary screw technology and we keep finding ways to improve it.

The new generation of Sullair air ends combines decades of experience in designing and manufacturing rotors — the most important part of the air end — with the latest in research and technology. Our patent-pending new air end continues to feature asymmetrical rotors precision milled for ultimate performance. And now the Sullair air end includes:

- Simpler design for increased uptime. Sullair engineers have developed the latest generation of air ends with the optimal number of parts using new casting technologies
- Larger rotor profile (230mm) for increased efficiency

The result? The highest performing Sullair air end. Ever. All without sacrificing the durability Sullair is known for.

SULLAIR 10-YEAR DIAMOND WARRANTY™

The Sullair 10-Year Diamond Warranty provides comprehensive protection for Sullair oil-flooded rotary screw air compressors. This program distinguishes itself by covering all major components for new air compressors (with discharge pressures up to 150 psig) — both parts and labor:

10 Years Coverage:
Sullair air end

5 Years Coverage:
Main motor
Aftercooler
Oil cooler
Separator vessel
Variable speed drive (if equipped)

Maintaining the Sullair 10-Year Diamond Warranty requires using Genuine Sullair parts and fluids, as well as the oil sampling program.

PERFORMANCE MATTERS
THE HEART OF A SULLAIR COMPRESSOR
THE SULLAIR AIR END

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FEATURES THAT PERFORM.
BENEFITS THAT COUNT.

A Sullair compressor is much greater than the sum of its parts. The new LS 90-110 features a patent-pending package design, in which all components are specially designed, engineered and manufactured to perform at the highest levels.
1. Sullair OptimalAir® Air Filter
   - High efficient/heavy-duty inlet filter holds up to five times more contaminant than conventional cellulose filters
   - Cleaner intake air keeps fluid clean and extends component life
   - 99.9% efficiency per ISO5011

2. NEW! Air End (Patent Pending)
The heart of all compressors, Sullair air ends are known worldwide for their durability. The new Sullair design features:
   - All new casting featuring internally ported lubricant passages
   - Asymmetrical rotors designed, engineered and manufactured in the USA
   - Proven bearing design to extend bearing life

Sullair air ends are protected by the exclusive Sullair Diamond Warranty for 10 years*

3. Sullair Air-Fluid Separator
   - Designed for low pressure drop, reducing energy requirements
   - High-efficiency media maximizes oil removal from compressed air
   - Low carryover (<2ppm) means fewer lubricant top-offs needed
   - ASME and CRN approved

4. Cooling System
   - Heavy-duty, oversized cooling system designed for 46°C (115°F) applications
   - Easy-clean access panels designed in the package
   - Separate oil cooler and aftercooler reduces imbalanced temperature loads

5. Motor
   - TEFC, Premium efficient motor
   - Heavy-duty, slow running 1800 RPM design
   - Extended life when compared to higher RPM motors
   - Class F insulation, Class B rise for higher temperature operation

Capacity Control Options
   - NEW! Electronic Spiral Valve: Proven Sullair spiral valve technology — now with electronic precision and control to more tightly match supply to system demand
   - Variable Speed Drive (VSD): Provides maximum energy efficiency and operating consistency by adjusting motor speed to match compressed air supply needs

Highest Quality Lubricants
   - Genuine Sullube®, powered by Dow Technology standard
   - 10,000-hour, non-varnishing fluid protects and cleans your compressor
   - Polyglycol base provides optimal viscosity and helps optimize operating temperatures
   - Optional PristineFG™ food-grade lubricant

NEW! Sullair Touch Screen (STS) Controller
   - 10” color screen for easy viewing and intuitive operation
   - Menu-driven screens offer easy access to compressor controls
   - Integrated graphing and trending to analyze compressor performance
   - Sequencing up to 16 compressors

NEW! AirLinx™ Remote Monitoring
   - Connect anywhere to keep an eye on compressor operation, and reduce the risk of unplanned downtime
   - Monitor pressure and temperature, as well as running hours and service hours
   - Alerts for service and warnings
   - Data stored at 15-minute intervals
   - Customizable reporting, from Basic to Advanced
   - Real-time information through cellular connection

AirLinx Compressor Monitoring is available for compressors operating in the US, Canada and Mexico.

Plus — the following features are standard on the new LS Series:
   - Wye-Delta Starter
   - Zero loss drain
   - Phase Monitor
   - Enclosure with hinged panels — easily removable for service
   - Full floor to help keep dust and debris out

* Sullair Diamond Warranty applies to compressors with operating pressures up to 150 psig.
The costs to operate an air compressor — especially energy costs — can quickly exceed the initial purchase price. Effectively matching compressor production capacity to your facility needs is the best way to save both energy and money.

Sullair offers two capacity control options to most effectively manage your compressed air production:

- **NEW!** Electronic Spiral Valve
- Variable Speed Drive
NEW! Sullair Electronic Spiral Valve Controls

For the first time, electronic spiral valve controls are available with Sullair compressors. This new feature combines the performance and reliability Sullair is known for in spiral valve technology with the ease and precision of touch screen controls.

Spiral valve technology represents an energy-efficient control scheme that matches compressor displacement to demand without reducing inlet pressure or increasing compression ratios. Managed by the Sullair Touch Screen Controller, the electronic spiral valve maintains a tight 1 PSI control band — closely matching machine supply to demand need.

Variable Displacement Air End

Compressors with electronic spiral valve feature a variable displacement air end. Compression volume is varied to suit air demand by progressively opening or closing internal bypass ports on the air end.
- Closed bypass ports utilize the entire length of the rotor and compression chamber
- Partially open and open bypass ports reduce the length of the rotor used for air compression, which in turn utilizes less energy

Spiral Valve Benefits

- Capacity is matched to system demand, reducing cycling time and extending component life
- Multiple Spiral Valve compressors may be sequenced to operate in synchronous fashion
- Up to 60% turndown capability with Electronic Spiral Valve
- Outstanding energy efficiency in all operating conditions including:
  - High elevation
  - Dirty environments

**CLOSED BYPASS PORTS**

When the bypass ports are closed, the full compression chamber is used.

**PARTIALLY OPEN BYPASS PORTS**

With the bypass ports partially open — the compression chamber is shortened. Less intake air is fully compressed — saving energy.

**OPEN BYPASS PORTS**

Fully open bypass ports further shorten the compression chamber providing maximum turndown.

The Sullair LS Series is the first to offer Electronic Spiral Valve operation with Sullair compressors. Electronic Spiral Valves offer more precision when compared to manually operated spiral valves.
AIR COMPRESSORS WITH VSD

MAXIMIZE ENERGY EFFICIENCY AND OPERATING CONSISTENCY

Variable Speed Drive (VSD) allows a compressor to automatically adjust motor speed, matching output to demand.

**Sullair Compressors with VSD Provide:**
- Excellent energy savings — only compressed air needed is produced
- Relief from potential peak demand charges
- Possible utility company rebates
- Flexibility for future growth — both capacity and pressure may be varied
- Lowest life-cycle cost
- DC link choke
- Stable system pressure
- Helps ensure consistent product quality
- Reduced system air leaks
- Reduced storage requirements

The chart 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.
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
ULTIMATE IN USER CONTROL

The new Sullair Touch Screen (STS) Controller utilizes a large 10" color screen for easy viewing in any lighting conditions.
Menu-driven screens provide easy access to all compressor controls
- Support for sequencing up to 16 compressors
- More communication capabilities: Ethernet, ModBus RTU and ModBus TCP, Cellular (AirLinx™ service)
- Remote access capability via VNC (Virtual Network Computing) protocol
- Real time clock control
- NEMA 4 X environmental protection
- Discreet Start and Stop 22mm buttons
- Bright operating status LEDs even when display is dimmed
- Expandable I/O for additional sensor monitoring and output control
- Electronic Spiral Valve control for precise pressure regulation
- Supports power monitoring
- Trend graphing of operational parameters
- Most controller functions and adjustments via protected controller submenus
- New data download capabilities

AirLinx™ Remote Monitoring
AirLinx enables you to stay connected to your compressor operations wherever you are. It provides automated service and fault alerts, as well as access to a portal where system performance can be viewed. AirLinx reduces the risk of unplanned downtime and ensures timely service.

AirLinx™ Service Features
- Pressure monitoring
- Compressor temperature monitoring
- Running hours and service hours monitoring
- Running hours monitoring
- Alerts for service and warnings breakdowns
- Data stored at 15-minute intervals

Provides VSD load profile graphing capabilities
- One year of data retained on the cloud

AirLinx can be customized to provide different service levels:
Basic: Email and text notifications for fault and warning conditions
Advanced: Tracking and visualizing all relevant performance parameters with reporting tools to support the management of the compressor system
Sullair Air Treatment

A well-designed air treatment system has a number of critical stages, each contributing to the goal of clean, dry air. Sullair provides a comprehensive portfolio of options to help you achieve your air quality objectives:

- **Dryers** — refrigerated and desiccant — with flow capacities from 5 to 30,000 cfm, to help keep moisture out of your compressed air system
- **Filtration and Mist Eliminators** — designed to help keep contaminants out of the air stream
- **Oil/Water Separators** — designed to manage condensate discharge
- **Drains** — designed to remove condensate from compressors, dryers and filters
- **Flow Controllers** — designed to help minimize significant fluctuations in compressed air supply and demand

Energy costs associated with compressed air operations are typically one of the largest expenditures in a facility. The US Department of Energy (DOE) has estimated that on average more than 50% — or $20,000 — of the energy costs to run one 100 hp air compressor is wasted.

A Sullair air audit can help maximize your compressed air investment by identifying savings throughout your operations. It helps ensure that the right compressor, air treatment, piping and other features are properly specified — both today and in the future.

Sullair air audits are detailed reports providing information necessary to make sound decisions based on facts. Tailored around DOE standards, Sullair Air Audits review the entire compressed air system, from supply to distribution to use.
GENUINE PARTS. ORIGINAL LUBRICANTS.

The patent-pending package design of the new Sullair LS Series of compressors includes Sullair Genuine Parts and Sullair Original Lubricants designed, formulated and manufactured to optimize the operation of your Sullair compressor. Use of Sullair Genuine Parts and Sullair Original Lubricants helps keep your compressor operating efficiently while protecting your warranty.

Sullair Genuine Parts
Sullair Genuine Parts included in the new Sullair LS series include:

- OptimalAir® Air Filter Element
  - High efficient/heavy duty inlet filter features 99.95+ overall efficiency (per ISO 5011)
  - Cleaner air entering the compressor helps extend the life of the air end, oil filter, lubricant and separator
  - Sullair Oil Filters — designed to remove contaminants — extending the life of your compressor lubricant while helping protect internal components

Contact your authorized Sullair distributor to learn more about Sullair Genuine Parts available for your Sullair compressor.
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Sullair Service and Support
When you invest in a Sullair air compressor, you get more than just an asset in your facility. You get global service and support.

Sullair Authorized Distributors
Sullair authorized distributors span the globe and provide local service and support before, during and after the sale. Sullair authorized distributors provide:

- Sales and installation of complete compressed air systems and packages
- Air audits
- Preventive maintenance and service
- Emergency service
- And more

Sullair authorized distributors are your source for Sullair Genuine Parts and Genuine Sullair Fluids.

Sullair Service Department
Sullair service department provides responsive, knowledgeable service, including on-site and factory-based technical assistance to Sullair customers around the globe.

Genuine Sullube® by Sullair
Sullube is an extended-life, polyglycol base, synthetic fluid for stationary rotary screw air compressors. With advanced formulation powered by Dow Technology, Genuine Sullube is the standard factory fill for Sullair LS Series air compressors. Proven for more than a quarter century, this long-lasting fluid costs less per hour over your compressor’s life.

Sullube prevents the formation of varnish — the leading cause of air end failure — and keeps your compressors running exceptionally clean and cool. And a well-running compressor helps keep your operations up and running.

- One of the longest useful lives in the industry — up to 10,000 hours
- High flash point means reliable and safe operation
- High thermal conductivity helps dissipate heat
- Environmentally friendly — in-compressor condensate is biodegradable

Optional Lubricants
PristineFG™ Food Grade Lubricant is designed for use in food, beverage and pharmaceutical applications. It meets USDA and FDA H1 requirements for use in food processing areas. PristineFG lasts up to 6,000 hours, one of the longest useful lives of any food grade lubricant available.
For more than 50 years, Sullair has been on the leading edge of compressed air solutions. We were one of the first to execute rotary screw technology in our air compressors, and our machines are famous all over the world for their legendary durability. As the industry moves forward, Sullair will always be at the forefront with quality people, innovative solutions, and air compressors that are built to last.

Sullair was founded in Michigan City, Indiana in 1965, and has since expanded with a broad international network to serve customers in every corner of the globe. Sullair has offices in Chicago and manufacturing facilities in the United States, China and India — all ISO 9001 certified to ensure the highest quality standards in manufacturing. In addition, Sullair Suzhou and Shenzhen facilities are ISO 9001, ISO 14001 and OHSAS 18001 certified.
RELIABILITY
Customers who work with Sullair have found that the intangibles make all the difference — things like trust, confidence, and peace of mind. They go to work every day having full faith in their equipment, as well as the knowledge that dedicated distributors and Sullair personnel have their back every step of the way.

DURABILITY
Bulletproof. Built to last. However you spin it, Sullair compressors are in it for the long haul, driven by the design of the legendary air end. In factories and shops all over the world, you’ll find Sullair compressors that have stood the test of time, running consistently today like they did on day one.

PERFORMANCE
You have high expectations for your operations, and we make machines that share your work ethic. Sullair compressors do what they’re supposed to do, and they do it extremely well for a very long time. And working with us means not only access to clean, quality air, but also the tools you need to optimize this vital resource.
### SPECIFICATIONS

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<th>MOTOR</th>
<th>110 PSI</th>
<th>7.6 BAR</th>
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*ACFM measured in accordance with ISO1217, Annex C

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### FEATURE

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*For more information, contact your local authorized Sullair distributor.*