HITACHI
Inspire the Next

SULLAIR

TS SERIES

Lubricated Rotary Screw Air Compressors

250-350 hp ■ 190-260 kW

Hitachi Global Air Power

LEGENDARY SULLAIR PRODUCTS

Since 1965, Sullair Compressed Air Solutions have been known for their Reliability, Durability and Performance. The legacy continues now as Hitachi Global Air Power – featuring the legendary Sullair product line. Together, two titans in the industry bring experience, engineering and expertise for every compressed air need.

RELIABILITY

Customers who work with Sullair compressors have found 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 they have access to true compressor experts ready to support them every step of the way.

DURABILITY

Hitachi Global Air Power represents the collective strength of more than 150 years of compressor experience and the legendary durability of Sullair products. In shops and factories all around the world, our products have withstood the test of time, running consistently today as they did on day one.

PERFORMANCE

Sullair compressors are constantly engineered to incorporate the most advanced innovations to improve machine performance. This means machines engineered for energy efficiency, ease of use and simplified service and maintenance.

The Hitachi Global Air Power network of engineering and quality experts continues to build next-generation, environment-forward compressed air solutions to meet the demands of today's hard-working customers.

"WE SELECTED SULLAIR BECAUSE OF THEIR REPUTATION. IT'S BUILT WELL, DELIVERS, AND IS DEPENDABLE ..."

– BRIAN THIEL, GHOSTFISH BREWING COMPANY

THE NEXT GENERATION OF TWO-STAGE AIR COMPRESSION IS HERE

THE **MOST EFFICIENT** SULLAIR EVER

TS SERIES — DOUBLING DOWN ON EFFICIENCY

Expect big energy savings with the Sullair TS Series of Two-Stage Rotary Screw Air Compressors. Our engineers looked at increasing efficiency with an intense level of detail and it paid off.

- *Best-in-Class Efficiency* — the most efficient Sullair compressor ever*
- *Ease of Service & Use*
- *Legendary Sullair Durability*

Built on the platform of the Sullair LS Series of Single-Stage Rotary Air Compressors—which completely changed the game and has been in high demand since 2017—the Sullair TS Series takes the proven performance and revolutionary Sullair LS package design into two-stage compression.

*Based on current (March 2024) efficiency data published in accordance with the Compressed Air and Gas Institute (CAGI) third-party verification program.

EFFICIENCY, EASE OF SERVICE & USE—IT'S THE TOTAL PACKAGE

The Sullair TS Series features a proven package design with lift-off panels revealing premium components carefully designed, engineered and manufactured to optimize performance at every step.

The Sullair 10-Year Diamond Warranty provides comprehensive protection for Sullair lubricated rotary screw air compressors. This program distinguishes itself by covering all major components for new air compressors (with discharge pressures up to 150 psi).

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

10 Years Coverage:
- *Sullair Air End*

5 Years Coverage:
- *Main motor*
- *Fan motors*
- *Aftercooler oil cooler*
- *Separator vessel*
- *Variable Speed Drive (if equipped)*

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 ISO 5011*

2. Two-Stage Air End

The most efficient Sullair Two-Stage Air End EVER

- *Innovative over/under design with integrated gearbox*
  - *Patent-pending interstage cooling for increased efficiency and low pressure drop*
  - *Lighter and more compact*
  - *Optimized gearing for maximum efficiency*
- *Casting featuring internally ported lubricant passages*
- *Asymmetrical rotors designed, engineered and manufactured in the USA*
- *High-efficiency bearings in first and second stage*

*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*
- *Dual TEFC fan motors with VSD to help maintain stable discharge temperature—increasing efficiency*
- *Easy-clean access panels designed in the package*
- *Separate oil cooler and aftercooler reduces imbalanced temperature loads*

5. Motor

- *Super Premium Efficiency (IE4) TEFC motors*
  Standard on Fixed Speed and Electronic Spiral Valve models
  - *Premium Efficiency (IE3) TEFC motors*
    Standard on VSD models
- *Heavy-duty, slow running 1800 RPM design*
  - *Extended life when compared to higher RPM motors*
- *104°F (40°C) ambient motor temperature rating*
- *Class F insulation, Class B rise for higher temperature operation*

Capacity Control Options

- **Sullair Electronic Spiral Valve Technology:** *Proven spiral valve technology — 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® Factory Fill*
  - *Non-varnishing fluid protects and cleans your compressor*
  - *Polyglycol base provides optimal viscosity and helps optimize operating temperatures*
- *Optional PristineFG™ food-grade lubricant*

Enhanced 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*

AirLinx® Remote Monitoring

- *Connect anywhere to keep an eye on compressor operation, and reduce the risk of unplanned downtime*
- *Monitor pressure, temperature, 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*

Plus—the following features are standard on the TS 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*

TAKING LEGENDARY 2 THE NEXT LEVEL

Best-in-class efficiency starts with the heart of a Sullair Air Compressor—the Air End

OVER/UNDER DESIGN

THE MOST EFFICIENT SULLAIR TWO-STAGE AIR END EVER

- *Best-in-class airflow performance by allowing more cooling time between stages without introducing pressure drop*
- *Smaller/lighter*
  - *Can be placed in the same proven package design as LS Series Single-Stage models (190 - 260 kW)*
  - *Can be lifted with a two-ton hoist*
  - *Easier to service in the field*
- *Patent-pending interstage cooling for maximum efficiency*
  - *Lowers air temperature 12-15 degrees between first and second stages*
- *Threaded discharge valve*
  - *Minimizes restriction area for lower pressure drop*
- *Legendary Sullair rotors with high-efficiency bearings*
  - *321mm in first stage*
  - *230 mm in second stage*
- *Independent gear ratios for first and second stages allow more precision and higher efficiency across multiple pressure ratios*
  - *More balanced workload between first and second stages*
  - *Speed control for each stage*
- *Internal lubricant passages*
  - *All O-ring seals to help minimize leakage*

HOW TWO-STAGE COMPRESSION WORKS

Two-stage rotary screw compressors are designed for big energy savings because the compression work is shared between two stages.

These compressors feature either one air end with two distinct stages or two separate compression chambers.

Air enters the first stage or compression chamber to begin the compression process. It is then cooled by a process called interstage cooling before it enters the second stage where the air is compressed again.

BENEFITS OF TWO-STAGE COMPRESSION

- *High energy efficiency*
- *Longer air end and component life*

DID YOU KNOW?

COMPARED TO EQUALLY SIZED SINGLE-STAGE COMPRESSORS, TWO-STAGE COMPRESSORS OFFER A 12–15%* POWER ADVANTAGE.

- *Compression is divided between two stages resulting in power savings*
- *Reduced differential pressure across each stage minimizes internal leakage losses*

Example: *A single-stage compressor located at sea level and operating at 100 psi has a 7.9 to 1 compression ratio (in absolute terms).*

*A two-stage compressor operating at the same altitude and pressure has a **2.1** to **1** compression ratio per stage.*

**Compressed Air and Gas Handbook (sixth edition), Compressed Air and Gas Institute (CAGI)*

CAPACITY CONTROL OPTIONS

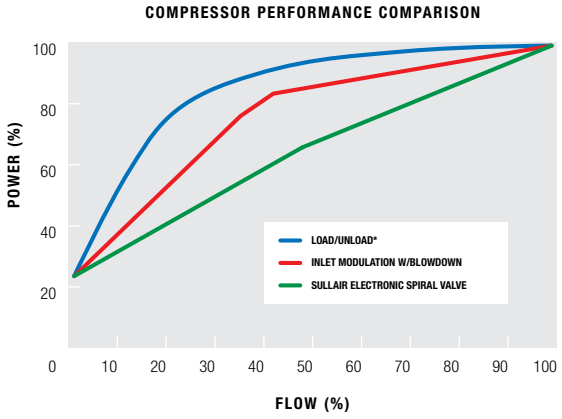
ELECTRONIC SPIRAL VALVE (ESV)

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 Electronic Spiral Valve Technology

TS Series compressors are now available with Electronic Spiral Valve Technology. This feature combines the performance and reliability Sullair products are known for in spiral valve technology with the ease and precision of touch screen controls.

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



Comparison powered by AirSuite

** L/UL curve assumes 1 gal/cfm storage; 30 second blowdown*
All power curves calculated using CAGI data.

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 closely matched to system demand, reducing cycling time and extending component life*
- *Multiple spiral valve compressors may be sequenced to operate in a synchronous fashion*
- *Up to 47% 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.

Example above illustrates Electronic Spiral Valve operation on a single stage compressor. The TS Series operates similarly with the spiral valve located in the first stage.

CAPACITY CONTROL OPTIONS

VARIABLE SPEED DRIVE (VSD)

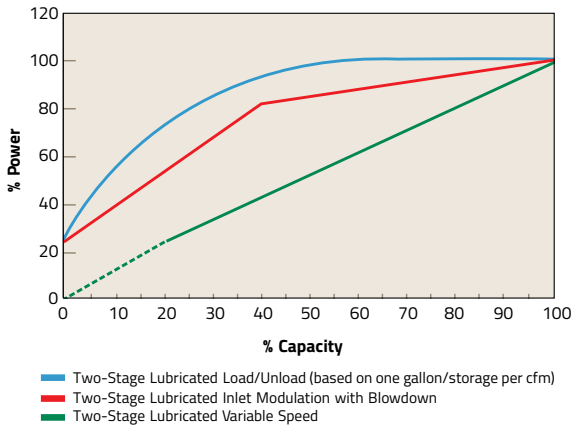
MAXIMIZE ENERGY EFFICIENCY AND OPERATING CONSISTENCY

Variable Speed Drive (VSD) enables 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*

PART-LOAD PERFORMANCE ASSESSMENT



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

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.

YOUR COMPRESSED AIR SYSTEM CAN IMPROVE YOUR BOTTOM LINE:

35% Energy Savings Potential in the First Five Years

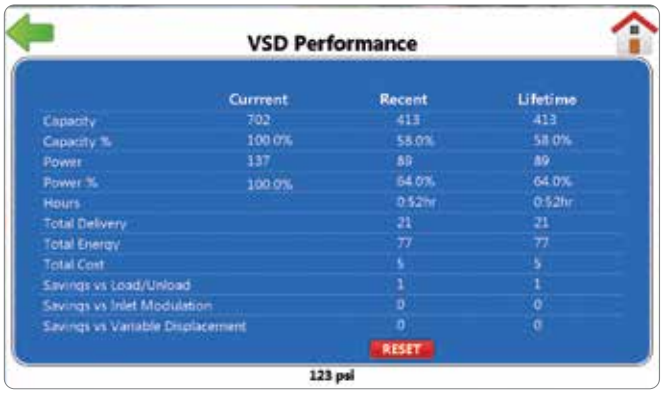
In just five years, the electrical power cost to operate a compressor can exceed six times its purchase price.

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*

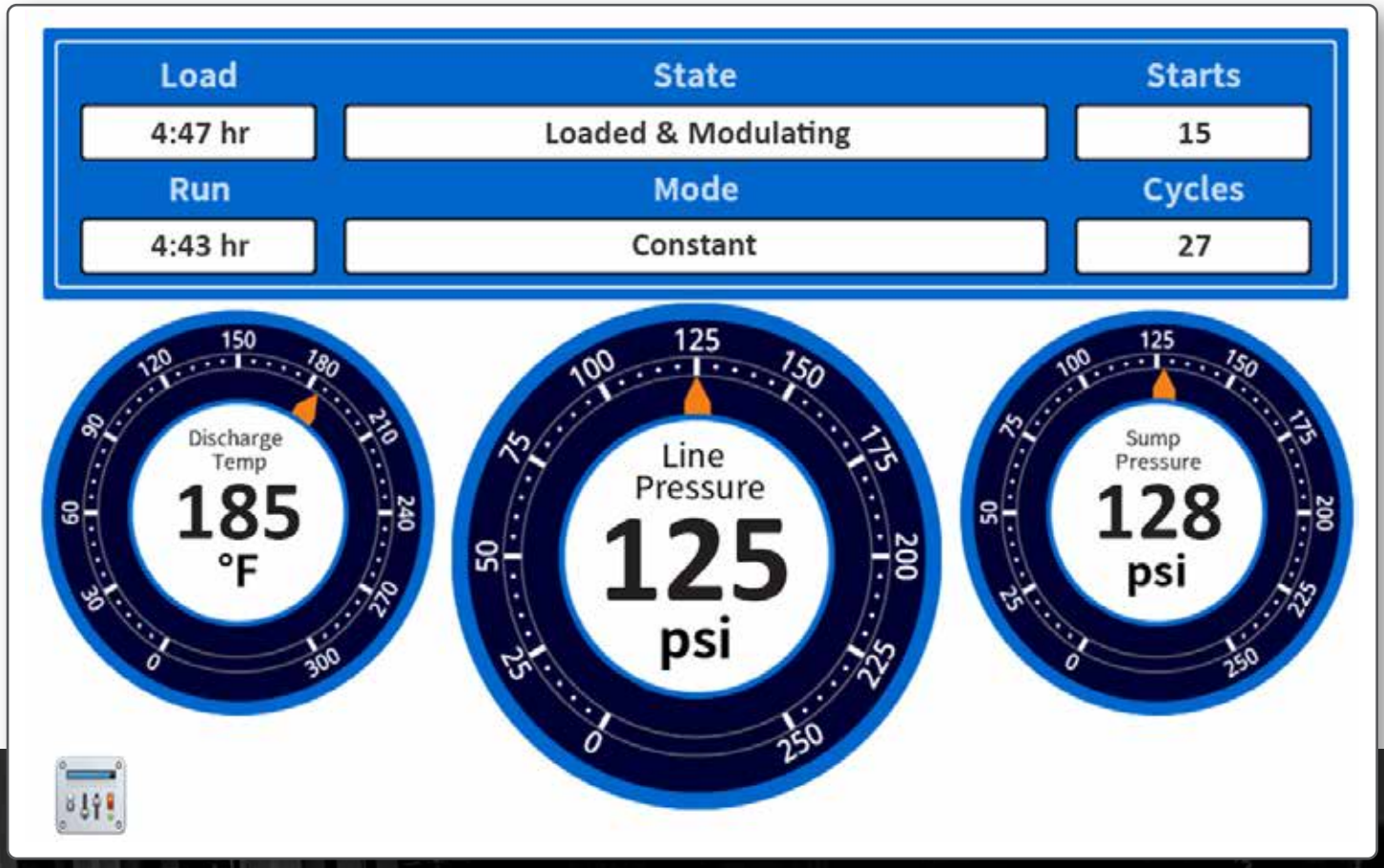
Total Compressor Flexibility

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

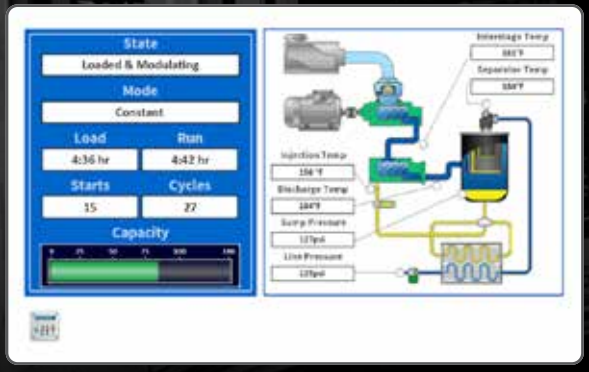


EASY & INTUITIVE ACCESS TO ALL COMPRESSOR CONTROLS

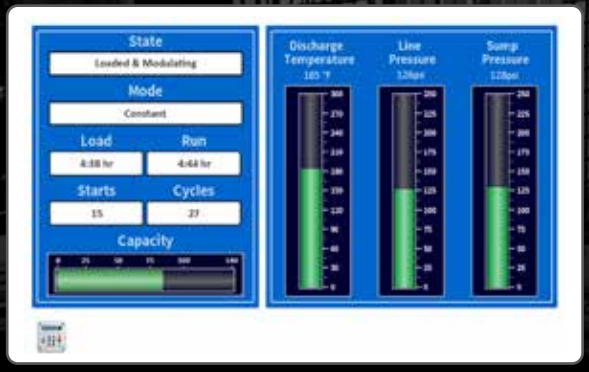
FULL CONTROL OF THE TS SERIES IS EASY WITH THE **ENHANCED**, **STATE-OF-THE-ART** SULLAIR TOUCH SCREEN CONTROLLER.



Optional Mimic Screen



Optional Mimic Screen



Optional Analog/Digital Screen

THE ULTIMATE CONTROLLER

THE ENHANCED SULLAIR TOUCH SCREEN (STS) CONTROLLER UTILIZES A LARGE 10" COLOR SCREEN FOR EASY VIEWING IN ANY LIGHTING CONDITION.

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)*
- *Start/Stop scheduling with pressure control*
- *NEMA 4 environmental protection*
- *Discrete Start and Stop 22 mm buttons*
- *Bright operating status LEDs, even when display is dimmed*
- *Expandable I/O for additional sensor monitoring and output control*
- *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 a portal where system performance and data trends can be viewed. AirLinx helps reduce the risk of unplanned downtime and helps ensure timely service.

AirLinx service features

- *Pressure monitoring*
- *Compressor temperature monitoring*
- *Running hours and service hours monitoring*
- *Alerts for service and warning 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 for fault and warning conditions*
- ***Advanced:*** *Tracking and visualizing all relevant performance parameters, with reporting tools to support the management of the compressor system*

*For units equipped with VSD

GREEN^2

SAVING GREEN WHILE BEING GREEN

It's easy being green with the Sullair TS Series. Best-in-class efficiency means paying lower electricity costs while also helping reduce your carbon footprint.

ACCORDING TO THE DEPARTMENT OF ENERGY (DOE), ELECTRICITY COSTS ACCOUNT FOR MORE THAN 75% OF THE TOTAL COST OF COMPRESSOR OWNERSHIP OVER A 10-YEAR PERIOD.

REDUCE. REUSE. RECYCLE.

Hitachi Global Air Power is green to the core—thinking about sustainability at every step. The TS Series is manufactured in a facility that has achieved carbon neutrality since 2021, and the vast majority of its parts can be recycled, reserviced or remanufactured beyond the life of the compressor.

During the development of the TS Series, our engineers meticulously examined every way to increase compressor efficiency and reduce greenhouse gas emissions up and down the value chain. This highly efficient and sustainable design contributes to reductions of Scope 2 emissions as well as Scope 3, Category 11 emissions as outlined by the Greenhouse Gas (GHG) Protocol.

Scope 2 Emissions:
Emissions a company causes indirectly that come from where the energy it purchases and uses is produced.

Scope 3 Emissions:
These emissions often define most of an organization's greenhouse gas emissions.

The broad variety of Scope 3 emissions are split further into categories.

Scope 3, Category 11 Emissions:
These emissions are defined as the "use of sold products." If a company produces equipment powered by electricity, category 11 is likely a large source of their emissions.

RELIABILITY^2 DURABILITY^2 PERFORMANCE^2

FEWER THAN 30 UNIQUE PARTS BETWEEN LS & TS MODELS*

TWO LEGENDARY MODELS WITH A LOT IN COMMON

Whether you need a single-stage, two-stage or a combination of the two, the LS Series and TS Series bring proven performance and next-level efficiency.

LS & TS SERIES OIL FLOODED ROTARY SCREW AIR COMPRESSORS

The Sullair LS Series completely changed the game back in 2017 bringing world-class efficiency and ease of service and ease of use while maintaining the legendary durability Sullair products are known for.

The Sullair TS Series takes the proven performance and revolutionary package design of the LS Series loved by so many of our customers into two-stage compression to provide best-in-class efficiency.

These two legendary models are built on the same platform using fewer than 30 unique parts between the two models. This means proven performance, common service parts and experienced compressor experts no matter which solution is right for you.

** Unique parts comparison includes LS and TS models 190-260 only.*

Feature	LS Standard	TS Standard	LS Optional	TS Optional
Power Ranges	*125 - 350 hp (90 - 260 kW)*	*250 - 350 hp (190 - 260 kW)*		
Lubricant	*Sullube®*	*Sullube®*	*PristineFG™ Food Grade*	*PristineFG™ Food Grade*
Enclosure	*Enclosed*	*Enclosed*	*Open*	*Open*
Capacity Control Options	*Inlet Modulation*	*Inlet Modulation*	*Electronic Spiral Valve or VSD*	*Electronic Spiral Valve or VSD*
Starter/Starter Box	*Wye-Delta/NEMA 4*	*Wye-Delta/NEMA 4*	*VSD/NEMA12*	*VSD/NEMA12*
Cooling	*Air Cooled*	*Air Cooled*	*Water Cooled*	*Water Cooled*
Drain	*Zero Loss*	*Zero Loss*		
Motor	**Super Premium Efficiency (IE4) TEFC Motor** *LS190-260 Fixed Speed & ESV models* **Premium Efficiency (IE3) TEFC Motor** *LS 90-160 all models & LS190 - 260 VSD models*	**Super Premium Efficiency (IE4) TEFC Motor** *Fixed Speed & ESV models* **Premium Efficiency (IE3) TEFC Motor** *VSD models*		
Fan Motor	*TEFC, VSD-Controlled Fan on LS190 - 260 Models*	*TEFC, VSD-Controlled Fan*	*Fixed Speed Fan Motor Standard for 55°C and High Static Option Models*	*Fixed Speed Fan Motor Standard for 55°C and High Static Option Models*
Controls	*Enhanced 10˝ Sullair Touch Screen*	*Enhanced 10˝ Sullair Touch Screen*		
Control Lines & Fittings	*Stainless Steel*	*Stainless Steel*		
Remote Monitoring	*AirLinx®*	*AirLinx®*		
Electrical Protection	*Phase Monitor*	*Phase Monitor*		
Additional Options			*55°C Package Weather Hood High Static*	*55°C Package Weather Hood High Static*
Cold Weather Options			*Control Box Heater Frost-Free Trap Heater*	*Control Box Heater Frost-Free Trap Heater*

GENUINE PARTS. ORIGINAL LUBRICANTS.

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

SULLAIR GENUINE PARTS

Sullair Genuine Parts included in the Sullair TS Series include:

- *OptimalAir® Air Filter Element*
  - *High-efficiency/heavy-duty inlet filter features 99.9% 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 compressor.

OPTIMIZING YOUR COMPRESSED AIR OPERATIONS

SULLAIR AIR TREATMENT

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

- ***Dryers*** *— refrigerated and desiccant — with flow capacities from 3 to 10,000 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*

AUDITS

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% of the energy costs to run one 100 hp air compressor is wasted.

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

Air audits include 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.

PRODUCT INFORMATION

FOR MORE INFORMATION, CONTACT YOUR LOCAL AUTHORIZED SULLAIR DISTRIBUTOR.

Scan to view the entire Oil Flooded line

SPECIFICATIONS			FREE AIR DELIVERY*									
MODEL	MOTOR		100 psi ▪ 7 bar		115 psi ▪ 8 bar		125 psi ▪ 8.6 bar		150 psi ▪ 10.3 bar		200 psi ▪ 13.8 bar	
	hp	kW	cfm ▪ m³/min		cfm ▪ m³/min		cfm ▪ m³/min		cfm ▪ m³/min		cfm ▪ m³/min	
TS190	250	190	1457	41.3	1396	39.5	1334	37.8	1189	33.7	994	28.2
TS190S	250	190	1443	40.9	1382	39.1	1321	37.4	1177	33.3	984	27.9
TS190V	250	190	1457	41.3	1396	39.5	1334	37.8	1189	33.7	994	28.2
TS220	300	220	1753	49.6	1678	47.5	1588	45	1458	41.3	1219	34.5
TS220S	300	220	1735	49.1	1662	47.1	1572	44.5	1444	40.9	1207	34.2
TS220V	300	220	1753	49.6	1678	47.5	1588	45	1458	41.3	1219	34.5
TS260	350	260	2033	57.6	1923	54.5	1854	54.5	1679	47.6	1457	41.3
TS260S	350	260	2013	57	1905	54	1835	52	1663	47.1	1443	40.9
TS260V	350	260	2033	57.6	1923	54.5	1854	54.5	1679	47.6	1457	41.3

**cfm measured in accordance with ISO1217, Annex C*

DIMENSIONS								
MODEL	LENGTH		WIDTH		HEIGHT		WEIGHT	
	in	mm	in	mm	in	mm	lbs	kg
TS190	141	3581	82	2083	92	2337	12,310	5584
TS190S	141	3581	82	2083	92	2337	12,358	5605
TS190V	141	3581	82	2083	92	2337	12,714	5767
TS220	141	3581	82	2083	92	2337	12,890	5847
TS220S	141	3581	82	2083	92	2337	12,939	5869
TS220V	141	3581	82	2083	92	2337	13,569	6155
TS260	141	3581	82	2083	92	2337	12,300	6123
TS260S	141	3581	82	2083	92	2337	13,549	6146
TS260V	141	3581	82	2083	92	2337	14,072	6383

TO LEARN MORE, CONTACT YOUR LOCAL AUTHORIZED SULLAIR DISTRIBUTOR.

Hitachi Global Air Power US, LLC

HitachiGlobalAirPower.com/Industrial

©2024 Hitachi Global Air Power US, LLC. All rights reserved. Specifications including appearance subject to change without notice. SAPTS190260202403-1
The Sullair symbol, Sullair wordmark, Sullube, OptimalAir and AirLinx are registered trademarks of Hitachi Global Air Power US, LLC.
PristineFG is a trademark of Hitachi Global Air Power US, LLC.