

To Provide Compressed Air System is Our Core Business

For the lowest purchasing cost for customers, Sullair provides an entire air system designed to lower operating cost, increase reliability and maximize return on investment.



Sullair offers compressed air system to help users reduce their operating costs and improve productivity by analyzing, managing and controlling all compressed air devices. To satisfy your special requirement on the compressed air system, please contact the local Sullair agents to seek more help. To acquire local Sullair agents' contact information, see the below website or make a phone call.



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Sullair DS Series Dry Oil-Free Screw Air Compressor 75-280kW



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The Only Air Compressor Manufacturer To Concentrate Exclusively On Screw Technology

Since 1965, Sullair Corporation has been leading the innovation in the field of screw compression and vacuum technology. With over 50-year product experiences, Sullair has been making continuous investment and innovation in this technology field. Utilizing the most advanced technologies, equipments and manufacturing technique, Sullair provides customers worldwide the best air compressor and vacuum equipment in order to meet the customers' various requirements.

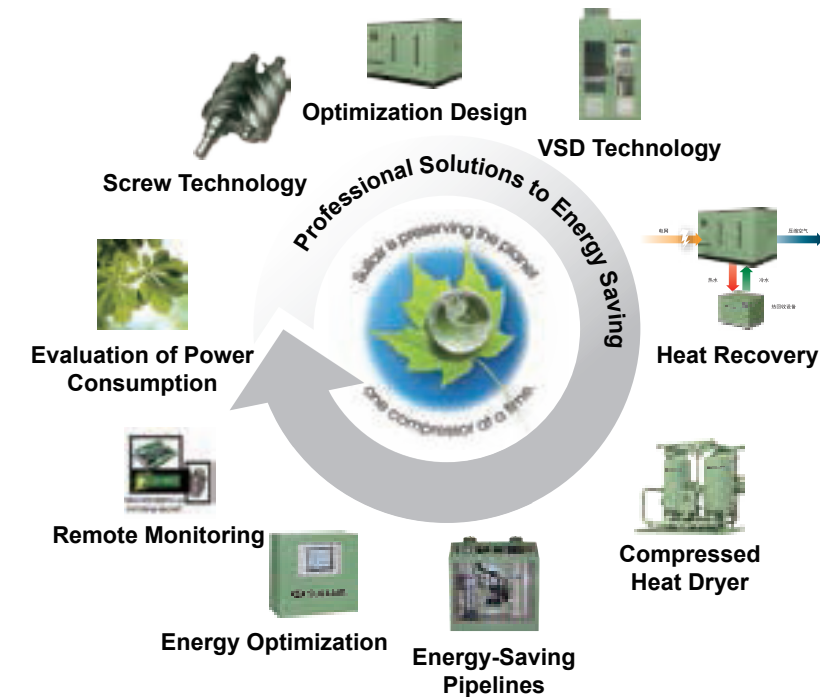
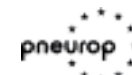
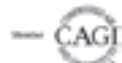
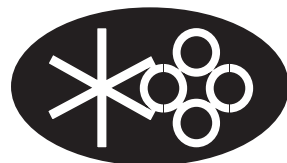
Sullair products are universally known around the world for its unique design, outstanding craftsmanship and superior quality. Sullair professionals provide you DS series dry oil-free screw compressors with reasonable structure, easily operation and great performance by continuous optimal design and induction of new technology while to ensure the amazing reliability, stability and related performance specifications. In fact, DS oil-free screw compressors have led this industry to a new direction in all aspects.



This company has been certified by ISO9001:2008 international quality management system.

This company has been certified by ISO14001:2004 international environment management system.

This company has been certified by OHSAS18001:2007 occupational health and safety management system.



"Class 0 " Oil-free Certification

"Class 0" certification of Sullair oil-free air compressor (Germany TÜV)

Sullair DS oil-free screw air compressor provides high-quality 100% oil-free compressed air. According to test and identification of DS oil-free compressors done by German Rheinland certification body TÜV, as certificated by TÜV, air quality of Sullair DS oil-free compressor exceeds the ISO8573-1 standard, reaching the highest "Class 0" oil-less level, i.e. ISO8573-1 Class 0.

Together with Sullair, You will Get More Than Air Compressors

What you will get from Sullair is the world's leading screw technology and global services. Sullair provides the manufacturing industries such as electronics, textile, food, construction, mining and energy with high-quality products and services.

The international service network of Sullair is inclusive of subsidiaries in different regions, designated agents and distributors who offer their best services to customers of Sullair around the world every day.



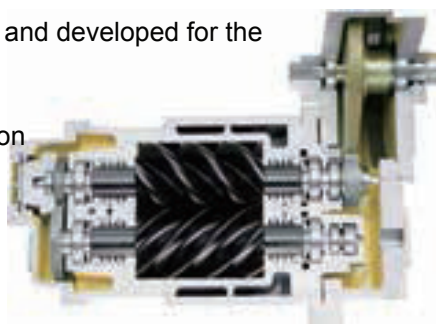
50 Years' Continuous Technology innovation Development History of DS Dry Oil-Free Screw Compressor

Leader of Screw Technology

Since 1965, Sullair has been recognized around the world as a leader in screw technology and vacuum technology. Apart from designing and manufacturing screw rotor with its own core technology, Sullair also provides products with excellent quality and highest efficiency to global customers, setting new standard in this field. Especially, Sullair DS oil-free screw air compressor won the US Yearly Industrial Product Award In 2010.

Core part of compressor, the screw air end which is designed by Sullair and developed for the 3rd generations is more efficient and reliable.

- Latest patent screw profile
- Matchmaking female and male screw with high manufacturing precision
- Special bearing adopted to replace balance piston which is a easily damage part
- 5-7 teeth design of high pressure rotor with better sealing effect
- High pressure rotor, made of stainless steel adapted to poor working condition
- Coating of fool level in compliance with FDA standard, complete safety and more reliability
- Process labyrinth air seal/oil seal may compress special air



The 3rd generation DS oil-free screw air end which is lately developed has the minimum internal leakage because of air outlet optimization and heat balance analysis according to three-dimension fluid theory by Sullair specialist in the designing process.

Actual rotating speed of screw is much lower than the critical speed, which has been get by CAE analysis (like torsion, vibration, etc.). This is very important for VSD models.

1981

Sullair developed the 1st generation of DA13 series oil-free compressor for rent market of petrochemical industry



1982

Integral stationary DW13 series oil-free compressor for general factory.



Sullair Technology

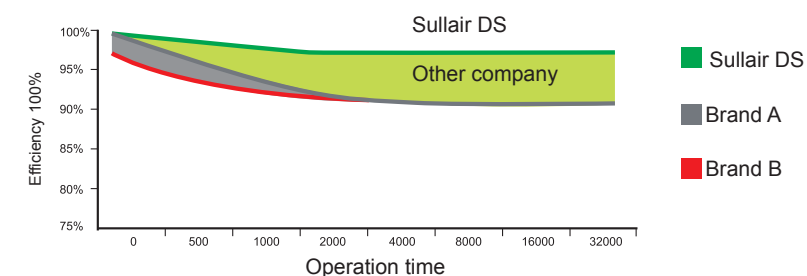
Utilizing the most advanced CFD technology, combined with the modernized equipment, Sullair designs and manufactures innovative oil-free screw air end, its multi-industry practical application has been proved to be the combination of outstanding craftsmanship and superior quality.

Commitment to Continuous Innovation

Sullair promised to constantly explore new ideas and seek new ways to meet industry's need for increasingly energy efficient products.

Traditional oil-free screw compressors have the issue of air end's lifetime and efficiency. Though the rotors, made of carbon steel, have thicken coating, with the damage of coating, efficiency will decrease dramatically which cause high failure rate of high pressure rotors. These problems can't be solved.

The latest screw rotors developed by Sullair can easily maintain long-term stability and best to balance the lift-time and efficiency by utilizing new profile with alloy steel and FDA food grade coating for low pressure rotors and 5-7 teeth and stainless steel for high pressure rotors.



Efficiency curve of screw performance with operation time

1995

Sullair launched the newly designed 2nd generation of DS18 series compressor, with rent and stationary type.



2010-2011

DS18 won the US Yearly Industrial Product Award In 2010. In 2011, Sullair launched new DS dry oil-free compressor and also VSD compressor in Chinese market.



High Quality Parts

Computer Controller

After development of several generations, monitoring and protection functions of controller have been improved, and its communication and remote control functions are enhanced, which can also conduct multicomputer networking and centralized control.

- Direct setting of operation parameters
- Display of operation parameters
- Predictive maintenance
- Communication network, RS485/Ethernet



Motor

Motors of high efficiency and high protection level are adopted, which can be used in continuous heavy-load condition.

- IP55 high level low-pressure motor, temperature rising of F level used in B level
- Energy efficiency mark of national GB Standard
- Option for HP motor



Gear Box Breather

Buffer Air sealing system ensures full oil-free operation of the air end:

- Ensure the positive pressure between the oil seal and gas seal of the air end so as to effectively prevent the leakage of fluid into the compressor chamber;
- An efficient oil fog recycle device to reduce the loss of fluid.



Independent Fluid System

High-standard fluid system is designed according to the standard of fluid station:

- Pre-lubricating before starting the compressor; extending bearing/gears lifetime by improving lubricating effect in low speed after turning off the compressor.
- Meet the needs for lubricant in low speed (such as VSD)
- Fluid pump can be operated intermittently to avoid permanent damage of air end bearings/gears, etc. if the machine stops for a long time

Air End Unit

Exceptional stable and durable performance of Sullair's air end is based on latest development technology and several decades product experience

- Sullair patent dry screw profile
- Stainless steel high pressure rotor
- Stainless steel compression ring air seal and labyrinth oil seal



Fluid Cooler

- Stainless steel cooler
- Shell-tube structure
- Large capacity design

Air Filter

Utilizing latest filter material, with protective guard outside, suitable for various environment

- Large-volume filter area, 30% larger than the ordinary filter
- Low resistance enhancement type
- Easy maintenance and quick replacement



Gear

- AGMA 12 class gear
- Low noise, low mechanical loss

Bearing

Rolling bearing specially made of aeronautical material:

- Great precision level
- Best rotation speed design
- low-friction and heavy-duty bearing
- Designed lifetime for over 100,000 hours



Air Inlet Valve Assembly

This two-position valve, specially used for oil-free screw compressor, have high reliability and durability and low unloading power:

- Integral design of air inlet valve and unload valve
- Frequent loading and unloading available
- Pneumatic control, easily and quick change the mode of loading and unloading

Intercooler/After Cooler

Designed refer to the oil-free screw standard and made of stainless steel, increasing residual amount of heat exchanger with small temperature rise, good cooling effect and core design for easy cleaning.

- Efficient shell-and-tube cooler
- Two-stage condensate separator inside
- Easily to change into heat recycle solution



Sullair VSD Air Compressor

VSD Compressor Saves More Energy

Energy saving is the greatest advantage for the VSD compressor, especially when the air consumption fluctuates greatly. Its flexibility and reliability make the advantage of energy saving more obvious, particularly for oil-free screw compressor with loading/unloading regulation. Sullair oil-free compressor can keep the highest power factor during the whole range of work frequency, which effectively prevents various problems caused by lower power factors.

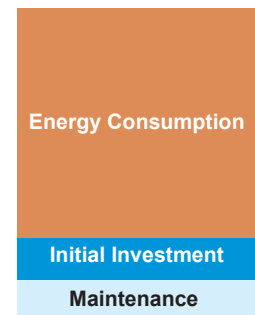
Standard Power Frequency Compressor



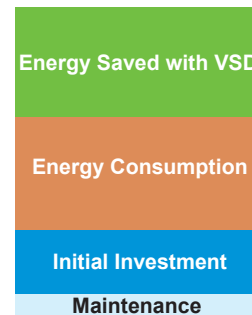
Sullair VSD Compressor



Standard Power Frequency Compressor



Sullair VSD Compressor



VSD Controller

- Integrated design with best performance for vacuum pump
- Modular design makes application and maintenance extremely convenient and friendly
- PID regulation function realizes the optimization of controller specifications
- An innovative cooling method and coated electronic modules significantly increase the stability and service life of the VSD controller
- Provide strong communication function with Rs485/USS, PROFIBUS, PROF/NET, DP, etc.
- Provide USB interface making local debugging and troubleshooting easier
- Integration of safety protection to satisfy the customer's higher safety requirements
- With EMC filter in compliance national electromagnetic standard



VSD Soft Start, Unlimited Starts and Stops

- No need start-delta start or other start methods, and no need to control the number of cold and hot starts
- Reduce the electrical characteristics requirement and save the costs

Sullair Special High Efficiency VSD Motor

- Adopt special electromagnetic design to effectively restrain the harm of higher harmonics and improve low-frequency output torque of motor
- Adopt special enameled wire for VSD motors to enhance the insulting strength of ground and interturn, especially the insulation shock resistance voltage capability
- Adopt special cooling method to ensure that the motor has good self-cooling ability at low frequency
- Effectively avoids low frequency resonance



Scope of Supply of DS Series Dry-type Oil-free Air Compressor

Features of Standard Configurations of DS Series Air Compressor

- ✓ Reliable oil-free compressor rotors, FDA standard PTFE coating
- ✓ Long bearing life and superior quality screw assembly
- ✓ Double gear transmission structure, patent designed, high efficiency and energy saving
- ✓ High precision transmission gear, reliable operation, low noise
- ✓ Independent oil pump design, reliable lubrication of bearing and gear
- ✓ Stainless steel shell-and-tube oil cooler, high reliability, long service life
- ✓ Two-stage compression, separate design, easy to maintenance
- ✓ TEFC motor, higher protection level
- ✓ Intelligent micro-computer controller
- ✓ Oversized air filter, high filter efficiency
- ✓ Stainless steel intercooling and after cooler, good heat transmission, easy to clean and replace (water-cooled)
- ✓ Realizing the sequence control for multi air compressors without extra equipment
- ✓ Environmental, healthy and safety design
- ✓ Centrifugal fan motor, quiet and high efficiency (air-cooled)
- ✓ Finned cooler, equipped with stainless steel pre-cooler with excellent cooling performance (air-cooled)

Optional Items

- ☐ Air-cooled
- ☐ VSD starts
- ☐ Remote control
- ☐ Hot air type (without after cooler)
- ☐ Water system with shut off valve
- ☐ Motor condensate-prevention heater
- ☐ Motor winding temperature sensor
- ☐ BEKO electronic drain valve



Technical Specifications

DS75-280 Air Compressor

Model	Motor (kW)	Max. Discharge Pressure			Weight (kg)	
		7.5bar	8.5bar	10.5bar	Air-cooled	Water-cooled
		Air Discharge Capacity (m³/min)				
DS75	75	12.5	12.5	11.1	3000	2650
DS90	90	15.8	14.8	13	3100	2750
DS110	110	20.2	18.7	15.8	3200	2900
DS132	132	22.2	20.2	18.7	3300	3000
DS145	145	22.5	22.2	20.2	3400	3100
DS160	160	30	27.7	25	4500	4500
DS200	200	37.8	35.1	31.4	4600	4600
DS250	250	46	44.5	39.2	4700	4700
DS280	280	50.5	47	44	4800	4750

Note: Every model is available for VSD compressor.

Dimension and Connection

Model	Length (mm)	Width (mm)	Height (mm)	Outlet Dimension	Connection Dimension of Cooling Water Pipe
DS75-145AC (VSD)	3165	1750	1889 (2042)	DN65	-
DS160-280AC (VSD)	4400	1900	2100 (2400)	DN100	-
DS75-145WC (VSD)	2650	1700	1800 (2100)	DN65	Rc1-1/2
DS160-280WC (VSD)	3300 (3500)	1900	2100 (2350)	DN100	Rc2

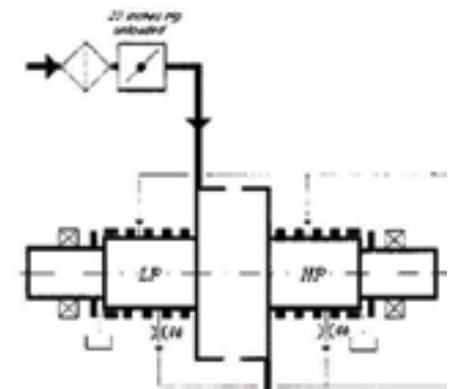
Note: Air discharge capacity is measured according to national standard GB3853 and meets ISO1217 Appendix C International Standard.

Complete Solutions _ Sullair Application Product

Nitrogen Compressor

DS oil-free compressor designs air end totally matched nitrogen booster for application market and provides air sealing system which is different from air compressors:

- Screw rotors sealing is designed according to industrial air sealing standard
- Nitrogen will not be polluted by air when unloading
- Gas system is specially designed
- Flange connection for inlet/outlet
- Adds extra controlling function
- Optional nitrogen detection function



EO Series Energy Saving Centralized Controller

By dynamic pressure monitoring and pre-analysis technology, EO centralized controller can control compressor pressure within the minimum running pressure zone which meets the minimum power requirement and can reasonably arrange compressor load and provide the lowest load to meet the requirement from customers for air supply by optimized configuration data and intelligent setting.

