# **Air Solutions Are Our Core Business**

For the lowest total cost of ownership, Sullair provides an air system designed to lower operating cost. Improve reliability and maximize return on investment.



Sullair offer air system to help compressed air users reduce their energy costs and improve their productivity by analyzing, managing and controlling total compressed air system. Information on the compressed air system tailored to your specific needs can be obtained by contacting your local Sullair Distributor. To acquire local distributor contact information, please visit the following website or call us directly.



美国寿力

SULLAIR CORPORATION, 3700 East Michigan Boulevard, Michigan City, IN 46360 SULLAIR ASIA LIMITED

Shenzhen Factory: Zuopaotai Road, Chiwan, Shekou, Shenzhen P.C.:518068 Tel:0755-26851686 Fax: 0755-26853475

Suzhou Factory: No,266 Changyang Street, Singapore Industrial Park, Suzhou Tel: 0521-87162388 Fax: 0512-8762389, 8762387

Sullair Taiwan LLC: 3F-1 No.247 Chung San Road Lin-Kou District, New Taipei City 24446 Taiwan R. O. C. Tel:886-2-26013500 ext. 16 Fax: 886-2-260133032

Sullair Singapore LLC: 510 Thomson Road# 13-01, SLF Building Singapore 298135. Tel: (65)65682800 Fax: (65)62599897













# Sullair Two-stage Tandem Rotary Screw Air Compressors with VCC Control 100-600HP





# The only air compressor manufacturer concentrate exclusively on Rotary screw technology

Since 1965, Sullair has been an innovator and leader in rotary screw compression and vacuum technology. With more than 40 years experience in this area, Sullair has been investing and innovating in all relating products. Utilizing the most modern technology, equipment and advanced manufacturing process, Sullair provides global customers with high quality air compressors and vacuum equipments, continuously meeting customer's various requirements.

Sullair products are known for their exclusive design, outstanding craftsmanship and superior quality. Under the premise of ensuring proven reliability, stability and technological parameters, Sullair specialists provide you with TS series 100-600HP air compressors with excellent structure, easy operation and remarkable performance by continuous optimization. In fact, TS series air compressors sets a new standard for the industry in every aspect.











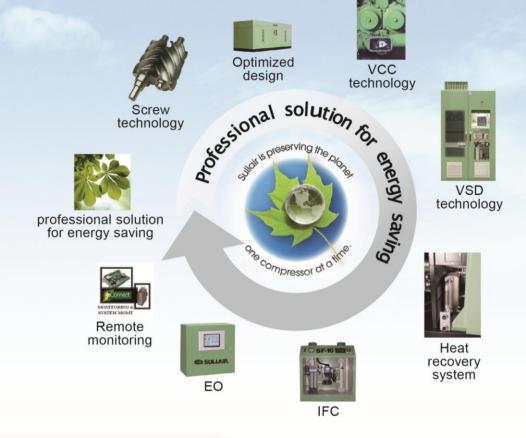














# **Energy Saving Certification**

All the efficiency level of Sullair TS series air compressors can meet national energy efficiency standards level 2, some models achieve national top standard.

# Sullair with you, more than Air Compressor

What you get in Sullair is not only the air compressor, but also the world advanced screw technology and global sevice.

Sullair Company provides products and service of high quality for various industries such as electronics, textile, food, construction, mining, energy etc.

International service network of Sullair includes branch company, authorized agents and distributors all over the world, who provide perfect service for customers in every corner of the world.











# Distinctive advantage of TS series air compressor

# Standard configuration of TS series air compressor

- ✓ High-quality rotary screw assembly
- the national efficiency standard level 2.
- ▼ Tapered roller bearing used for exhaust to extend airend life
- ✓ Stand TS series air compressor use efficient and high-capacity moisture separator with automatic drainage function
- ✓ IEC4 efficient motor, excellent design for motor.
- ✓ Large capacity, low pressure drop and high precision nanometer air filter
- SRF 1/4000 lubricant is suitable for bad working
- ✓ Single-stage oil separator, reduce fluid carryover to a maximum of 3ppm
- ✓ loading and unloading capacity control function
- ✓ Sequence control for several air compressors
- ▼ Excellent micro-computer controller

# Sullair Sullube Lubricant + 5-year warranty of airend

Compared with normal mineral lubricant short service life and environment pollution caused by condensatewater mineral oil containing discharged, Sullair provide Sullube fluid with 8000 hours service life, which is 8 times of traditional mineral lubricant. And condensate contained fluid can be biodegradable and directly discharged. Sullair Sullube fluid also has some other advantages including high-flash point, non-adhesive. anti-corrosion, non-toxic, high thermal conductivity and etc. If choosing Sullair Sullube fluid and operate according to Sullair relevant instruction, Sullair will provide 5-year warranty for air end.



5 years warranty for rotary screw assembly

# Standard option of TS series air compressor

- ☐ 8000 hours, two-stage oil separator ▼ Two-stage compressor, full range of TS surpasses □ Sullair Sullube lubricant + 5 year warranty of
  - ☐ Modulation valve
  - ☐ VCC built-in, range of capacity control max to 40% of nominal capacity
  - ☐ VSD built-in, range of capacity control max to 30% of nominal capacity
  - ☐ Both VCC & VSD built-in, range of capacity control max to 20% of nominal capacity

  - ☐ Control system of EO series
  - ☐ Heat recovery device built-in

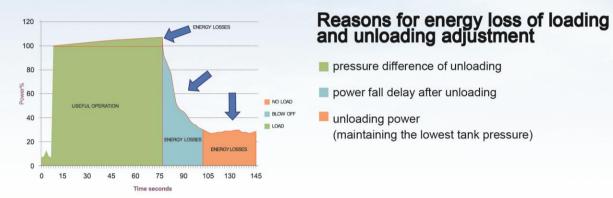


Operate according to Sullair relevant instruction, Sullair commitment for rotary screw assembly:

Non un-artificial quality issue within 5 years Non-change of relevant technical parameters within 5 years

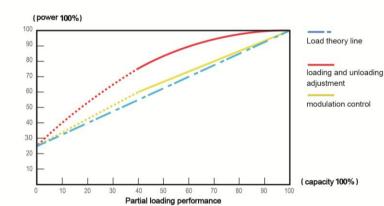
# Air inlet valve

Traditional loading and unloading adjustment mode will make energy loss. If customer uses less than rated air capacity during the air compressor loading process, it will make energy loss before reaching unloading pressure. Moreover, air compressor will make large amount of energy loss in unloading and no-load process.



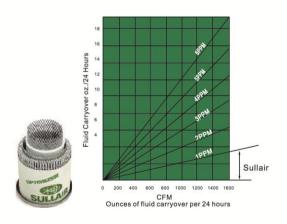
Sullair modulation valve can reduce frequency of loading and unloading and will adjust the inlet when actual air consumption between 40% ~ 100%, to meet customer's need better and save energy. At meantime, it also can reduce loading impact and extend working life.





# Two-stage oil separator

Traditional oil separator is single filter, fluid carryover less than 3PPM with short working life. Sullair can provide oil separator which used two-stage nested separation and professional folding filter material to make filter area double increased, therefore reduce fluid carryover to a maximum of 2ppm and working life is over 8000 hours. So Sullair could provide customers with cleaner compressed air and at the same time, reducing the loading of the postprocessing equipment.



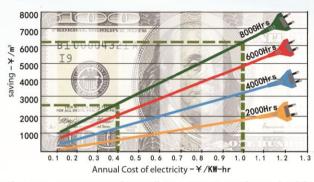
# TS series air compressor

# Airend

Two-stage compressor and energy saving. Ordinary single-stage compression is 7bar and the compression ratio is 7.9:1.

Sullair TS series use two-stage compressor with each stage of compression ratio of 2.8:1.

With lower compression ratio, the compression leakage loss is reduced and the compression efficiency improves significantly.



The two-stage airend install in series to prolong the lifespan of bearing.

The design of the compressor rotor pitch line and slot reduces internal leakage.

High quality bearing with design life of 100000 hours



# 2 Cooling water system

The large capacity oil cooler design and aftercooler design. Compressed air through shell side are the best design of after cooler recommended by the American society of petroleum engineers.

Cooling performance persistence and easy maintenance.

# 3 Pipe connection

Choose metal tube as exhausting line.

# Moisture separator

Moisture separator with automatic drain. Large capacity and good separation effect



# Thermal valve and oil filter base

Imported thermal valve core. Environmental filter material which filtering accuracy over 99.5%. Oil filter base has pressure difference alert function.



# **6** Tank

Structure of oil and air separator in upper cyclone separation can efficiently enhance pre-separation effect.

Low pressure drop makes lower energy loss. Rotary table design in the top.



# Air filter

The design air filter with cyclone pre-separation structure to prolong the service life. Large capacity and heavy-duty air filter. The high precision filter with low initial pressure drop.



# 8 Air inlet valve

The air inlet valve with capacity inlet control and blow down function could reduce the frequency of loading/unloading and impact of system loading efficiently to meet customers' need better.

# Motor

High efficiently motor. F class insulation, B level temperature rise. Standard configuration with thermistor can ensure circuit stability efficiently.

# 10 Controller panel

Humanized parameters adjustment function. LCD screen and friendly human-computer interface.

Alarm function and parameters real-time display function such as dew point temperature, environment temperature and etc.

The host current protection function.

15 per-alert of alarm including air filter blocking, oil filter blocking and etc



TS-32S

Elastic joint with protective cover can effectively reduce and absorb vibration transfer between airend and motor. Structure could be disassemble and disassembly radially.

Options on heat recovery system built-in, the recovery

heat can be used for per-heating of painting, boiler and

process, and also can be used for providing hot water

of employee shower.



All pipes connection are used efficient O-ring seal.





# Further energy saving solutions

# Sullair TS series VCC air compressor

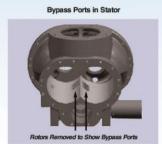
# Sullair VCC control technology

Compared with traditional air inlet control, Sullair patented technology spiral valve control is the control by compression chamber volume changed.

Once customers use is less than the rated capacity, spiral valve starting action to reduce compression chamber volume and saving the energy.

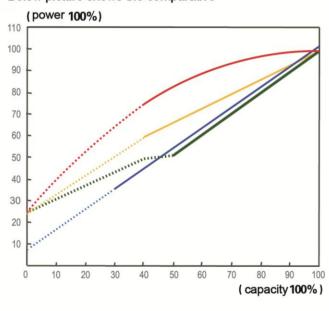
The less air customer used, the greater opening of spiral valve is. Spiral valve control range is 100% -40% of rated air capacity, it is Sullair unique option on energy saving.

Compared with other air compressor control mode, VCC technology has incomparable advantages on energy saving.



Blow picture shows the comparative

## Below picture shows the comparative



# Advantage of VCC control system:

- 1.Perfect match with customer air consumption, realized exhaust infinitely variable control between 40% to 100%
- Saving energy. Maximum energy saving 17% when partial loading.
- 3. Provide compressed air with relatively stable pressure

Loading/unloadingcontrol

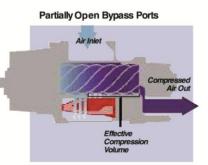
VSD technology

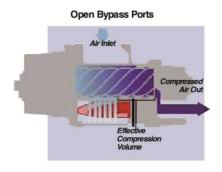
VCC technology

Modulationvalve

# Air Inlet Compressed Air Out Effective Compression

**Closed Bypass Ports** 





# Sullair TS series VSD control air compressor

# Converter

Optimal design of air compressor performance will make maintenance more convenience.

Forced cooling and coating circuit board can enhance stability significantly and will also extend service life.

# Sullair high efficiency frequency conversion motor

Special electromagnetic design can effective control the motor damage caused by high harmonics and improve the low frequency output torque of motor. Special frequency conversion motor varnished wire can strengthen between ground insulation and turn-to-turn insulation, especially to enhancethe resistance impact voltage capability of insulation.

Special cooling process ensured motor has great self-cooling capacity when operation under low frequency, it can also help avoid low frequency covibration efficiently.

# Frequency conversion soft start, no limitation on start and stop

No need start delta and other start, no need limit to the number of hot and cold start, avoid impact current generated by directly start and extend machine service life.

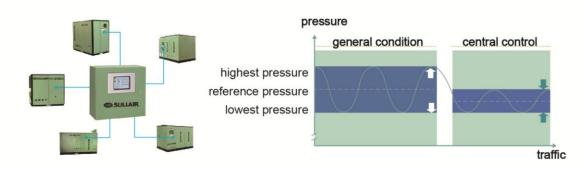


## Sullair IFC

IFC Installed at the inlet of the air pipe, accurate and sensitive control of compressed air flow output through constant pressure air supply (+-1PSI), eliminate pressure waste to reduce flow consumption and compressor air produce working, and realized energy saving. At meantime, optimize production process to improve manufacture quality.

# Sullair EO optimization system

Efficient air compressor management is the fast way to realize energy saving. Working pressure reduced 1bar will achieve direct energy saving 7%, at the same time, reduced leaking will also energy saving 3%. Sullair EO central controller series will make our customer connect all compressor and dryer to reduce the whole pressure area, no need higher working pressure and can be optimized compressor assembly at any time.



# **Technical Specification**

# TS100-600HP performance parameter

	Motor	Ma	aximum dis	Woight	Disabassa			
Model	HP	7.6bar	8.6bar	10.5bar	12.5bar	Weight kg	Discharge connection	
			Capacity 1					
TS20-100	100	14. 9	14	12	-	2800	DN65	
TS20-125	125	18. 9	17. 4	15. 7	14	3100	DN65	
TS20-150	150	22. 9	21	18. 9	17. 4	3250	DN65	
TS20-175	175	25. 3	24	21. 1	20	3950	DN65	
TS20-200	200	29	27. 2	24. 8	22. 9	4025	DN65	
TS32S-400	400	61.7	57. 1	49. 8	47. 2	11500	DN100	
TS32S-450	450	69.5	66	57. 1	49. 8	11500	DN100	
TS32S-500	500		73. 1	66	57. 1	11500	DN125	
TS32S-600	600	-	85. 5	73. 1	66	11500	DN125	

# Dimension and connection

Model	Voltage	Motor IP	Cooling method	Length mm	Width mm	Height mm	Pipe Connection
TS20-100	380V	ODP/TE	AC/WC	3250	1600	1857	G1-1/2
TS20-125	380V	ODP/TE	AC/WC	3250	1600	1857	G1-1/2
TS20-150	380V	ODP/TE	AC/WC	3250	1600	1857	G1-1/2
TS20-175	380V	ODP/TE	AC/WC	3250	1600	1857	G1-1/2
TS20-200	380V	ODP/TE	AC/WC	3250	1600	1857	G1-1/2
TS32S-400	380V	ODP	WC	4400	2160	2210	G2
TS32S-450	380V	ODP	WC	4400	2160	2210	G2
TS32S-400	380V	TE	WC	5010	2160	2210	G2
TS32S-450	380V	TE	WC	5010	2160	2210	G2
TS32S-400	6/10KV	ODP/TE	WC	5010	2160	2210	G2
TS32S-450	6/10KV	ODP/TE	WC	5010	2160	2210	G2
TS32S-500	6/10KV	ODP/TE	WC	5010	2160	2210	G2-1/2
TS32S-600	6/10KV	ODP/TE	WC	5010	2160	2210	G2-1/2

<sup>\*1.</sup> Air out capacity is measured under the rated discharge pressure according to the GB3853 (the same as ISO 1217, attached C)

<sup>2.</sup> All types of high voltage switch starter should be disposed separately.

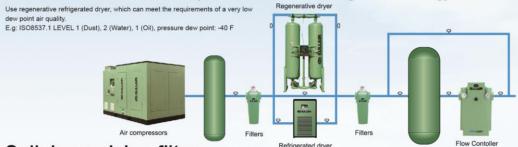


# Sullair compressed air system

Sullair compressed air system including: air compressor, refrigerated dryer, adsorption dryer, compressed air filter and IFC controller.

According to different requirement of compressed air, Sullair can provide different solution.

Sullair compressed air can meet stringent air quality standard ISO8573.1:2001, compressed air is critical to meet the needs of the customer premises while consuming minimal energy.



# Sullair precision filter

Precision compressed air filter is after process filter which is US Sullair according to market demand, specialized developed and manufactured

Model			Pipe									
Туре	Description	Micron rating	Oil carryover	diameter	Capacity	Dimension ( mm )					Weight	
SCF	General Converged	1	0. 05	(NPT)								
SCH	Efficient Converged	0. 01	0. 01	Standard								
SCC	Efficient activated carbon	_	0.003	taper pipe thread			А В	С	D	E	F	kg
SCR	General dust	1	_			Α						
SCHR	Efficient dust	0. 01	<del>-</del>	unoud								
340			1-1/2"	9.6	170	433	383		100		5.1	
465			2"	13.3	170	524.5	474.5		100		7	
700			2"	19.8	170	525	475		100		7	
910			3"	25.8	205	642	582		100		11.1	
1315				3"	37.3	205	832	772		100		13.9
CPF,CPH,CPC Flange filter												
1700			DN100	48	100FLG	450	1140	170	650	201	94	
2200			DN100	63	100FLG	450	1140	170	650	201	105	

# Sullair refrigerated dryer

Sullair SRC refrigerated dryer is after process dryer which is US Sullair according to market demand, specialized developed and manufactured

Model	Flow rate m³/min	Power Input kW	Connection pipe diameter	Length mm	Width mm	Height mm	Weight kg
SRC-380	10.8	1.62	2"	672	920	1015	140
SRC-530	15	2.05	2"	672	920	1015	144
SRC-710	20	2.23	2"	672	920	1015	150
SRC-990	28	3.75	DN80	1310	1010	1500	420
SRC-1300	35	4.37	DN80	1310	1010	1500	450
SRC-1650	46.2	6.15	DN100	1310	1010	1500	470
SRC-2300	63	8.37	DN100	1810	1010	1500	550
SRC-2700	75	12.16	DN150	1810	1010	1500	580

<sup>\*</sup> Reference working condition, inlet temperature 42C, ambient temperature 38C, inlet pressure 7bar