

# COMPRESSORS





# South-Tek Systems

South-Tek Systems provides complete air and gas solutions to power mission-critical operations. We deliver single-source solutions with unmatched support through a full product suite, powering greater control at lower costs for excellent results.

South-Tek leads the industry in nitrogen generation innovation, offering patented technology for maximum efficiency and longevity, coupled with unparalleled customer support.

Backed by over 20 years of experience, we have everything you need to power your mission, from nitrogen generators to compressors, filters and dryers.

## EXPERTISE

Find the right solution for every application.

## CONTROL

Take control of your processes.

## PERFORMANCE

Generate excellence, every time.



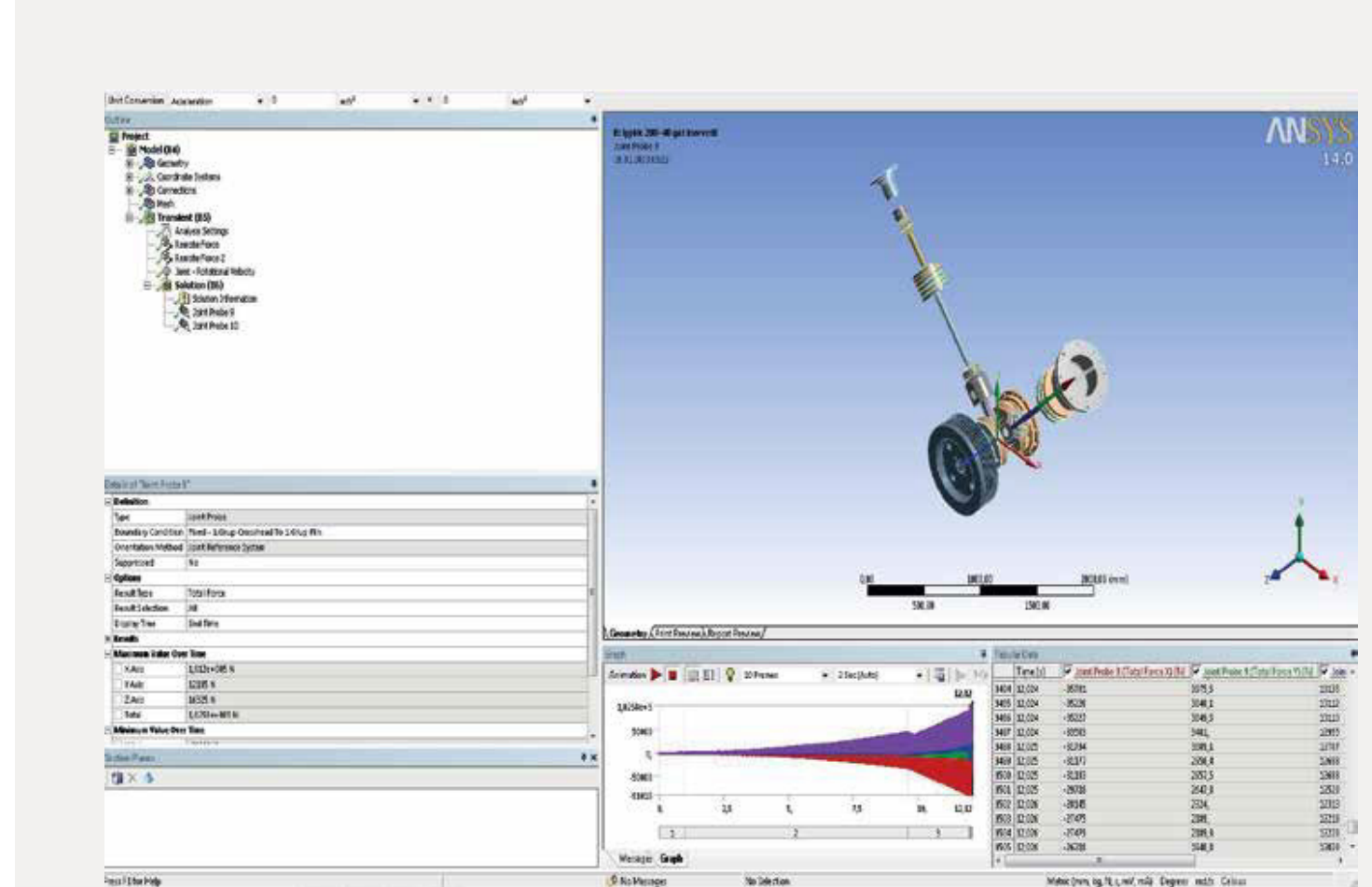
# Why South-Tek

**South-Tek compressors  
provide high performance  
and efficiency.**

A key differentiator of South-Tek Systems is our technical team's approach to problem solving, prioritizing the best customer outcome at every step. Our commitment to service includes ensuring customers select the optimal compressor for their specific requirements.



Research and development is a core tenant of South-Tek's development and growth. Led by by experienced and highly qualified engineers and technicians, our state of the art technology leverages professional software and precise technical drawings to model each part in 3D. Compliance of these parts is ensured through various tests such as static, dynamic, thermal and vibration analysis, all meeting worldwide recognized standards and procedures. For example, Ansys software is used to provide accurate and reliable results to mirror behavior of parts under real operation.



South-Tek compressors are tested under tough conditions for four hours, measuring critical parameters such as thermal stresses, vibrations, noise levels, flow-rate and power values. These are recorded digitally using a proprietary test device designed exclusively for South-Tek compressors.



Rigorous testing ensures only equipment meeting our high standards proceeds to delivery.



The design of South-Tek products are all manufactured, inspected and tested with international standards and procedures. The instrumentation used for these tests are aligned with the latest technology.

TESTE BAŞLA		BİFTİ DÖNÜŞÜR VE SAKLA		TEST BİTİR	
Ortam :	1010 mb	40°C			
Ortam Nem (%) :		30.3			
Besleme Farkı :	040 mb	30.0°C			
Titrasyon (mamba) (I - 4) :	2,3	2,0	2,5	2,0	
Titrasyon (mamba) (II - 8) :	1,8	2,1	1,9	2,7	
Çıkış (mPa) :	vakum	361	mm	305	
Dışarı (mPa) :		1014			
Test Süresi :		04:07:21			

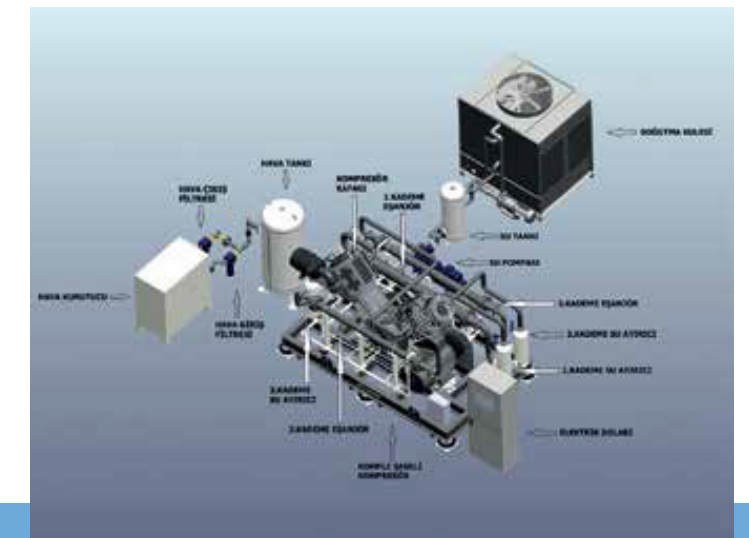
Basınç		
Kararlı Basınç :		7.5

Sıcaklık		
Ara Sıcaklığı Hava Çıkış Sıcaklığı :		34°C
Sıyıtıcı Yağ Giriş Sıcaklığı :		78.3°C
Sıyıtıcı Yağ Çıkış Sıcaklığı :		56.8°C

CCS Basınç Sıcaklık		
P1	7.5	T1
P2	7.4	





## Sales and Aftersales Service

South-Tek's most valuable assets are the qualified personnel who help our customers design the system that they require and select the compressor to best meet their needs. South-Tek engineers also advise on system layout best practices, while our technicians closely supervise commissioning and start up. South-Tek delivers a complete solution from start to finish, through one vendor, one brand and one superior support team.

## South-Tek Quality Policies

### CUSTOMER FOCUS:

- Deliver exceptional service and responsive support, exceeding customer expectations.
- Cultivate strong, lasting customer and supplier relationships.
- Become the preferred single-source solutions provider through a comprehensive product portfolio, competitive pricing, timely delivery, and superior after-sales service.

### OPERATIONAL EXCELLENCE:

- Maintain and continuously improve our ISO 9001:2015 Quality Management System.
- Implement efficient solutions to address complex challenges promptly.
- Translate research and development advancements and technological innovations into product improvements.

### EMPLOYEE DEVELOPMENT:

- Foster a culture of innovation and empower employees for success.



## Renting

Tightly manage operational costs through equipment rentals that provide pay-as-you-go options.

1

We partner to understand your exact compressed air needs.

2

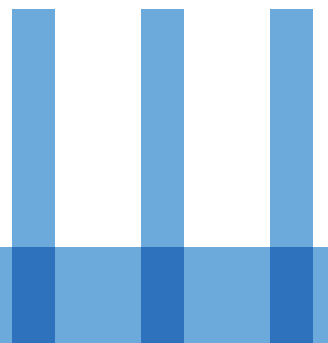
South-Tek delivers the system to best meet your specifications.

3

Rely on unmatched technical support and after sales service free of charge during the rental period.

4

We'll pick up the machine when your project is complete.





# Advantages of RENTAL

1

You will not have any expenses for spare parts and periodic maintenance.

2

By having the opportunity to rent any type of machine and model for your projects, you can eliminate inefficiency and cost losses that result from using the wrong equipment.

3

Given that brief transactions are excluded from the company's balance sheet liabilities, they do not impact your credit facilities. This allows you to utilize your current credit facilities for various ventures and bolster your operational capacity.



# South-Tek Systems Compressors



### ≡ Micro-Processor

The control system is equipped with a Micro-Processor and LCD screen designed especially for South-Tek. This is a Standard feature across all rotary screw product lines. The compressors operation mode, pressure, temperature, maintenance schedules, and many more parameters can be monitored and diagnosed on the LCD screen. It is also equipped with remote cloud monitoring functionality.

### ≡ Oil Separation Tank

Our air/oil separator is engineered for a two-stage separation of the air/oil mixture. The oil particles remaining in the oil measure 2-3 PPM at the tank output. Lubrication is facilitated by the pressure differential in the oil tank. All separator tanks hold ASME Certification.

### ≡ Air Suction Filter

Our system incorporates a two-stage air intake filter accompanied by a dust collection container and an automatic discharge system. It's engineered for easy maintenance and includes an electric indicator for replacement.

### ≡ Proportional Control Valve

The PCV regulates output flow to meet system needs by adjusting the inlet valve. This function is standard in all South-Tek compressors, ensuring precise matching of output to requirements.



### ≡ Inverter

MITSUBISHI and YASKAWA frequency drive units are used for the VSD models.

### ≡ Electric Panel

We choose contactors for motor starters, auxiliary contactors, thermal relays for motor protection, fuses, phase monitor relays, and transformers from CE-certified brands. These are employed as standard components for our compressors.



### ≡ Cooling System / Radial Fan

The air released from the air/oil separator gets cooled by the after cooler to a temperature approximately 50-60°F higher than the surrounding temperature, referred to as Cold Temperature Difference (CTD). The temperature of the oil cooler is regulated by a thermostatic mixing valve to ensure the delivery of oil at the correct temperature to the air end. The compressed air and oil lines are constructed using steel pipes and hydraulic hoses to withstand vibrations and expansion. For our compressors of 75kW and above, air and oil cooling are achieved using a radial fan, providing more efficient cooling and reducing noise. Additionally, the fan motor is operated with an inverter to enhance energy efficiency.

### ≡ Compressor Cabin Protection

Our compressors are fully assembled on the chassis and come with mechanically locking covers as a standard feature. These covers can be opened from any side to make repairs, conduct maintenance, and easily control processes. To reduce noise inside the cabin, the interior walls are coated with fireproof foam material, effectively lowering the machine's noise levels to an acceptable standard.

### ≡ Electric Motor

Our compressors utilize asynchronous electric motors featuring class F insulation, IP 55 protection, and IE3/IE4 efficiency, all CE-certified.

### ≡ Hydraulic Connections

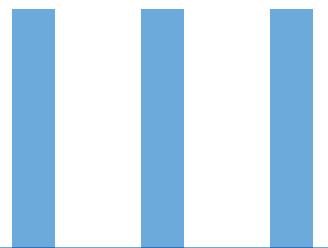
Our hydraulic connections utilize Gates, Vitillo and Vulcan branded hoses and are produced in-house with advanced machinery to ensure zero leakage.

### ≡ Screw Block

The South-Tek Screw Compressors utilize the Termomeccanica airend. They produce single staged, oil injected airends using advanced technology to ensure superior quality, high efficiency, and minimal energy usage.

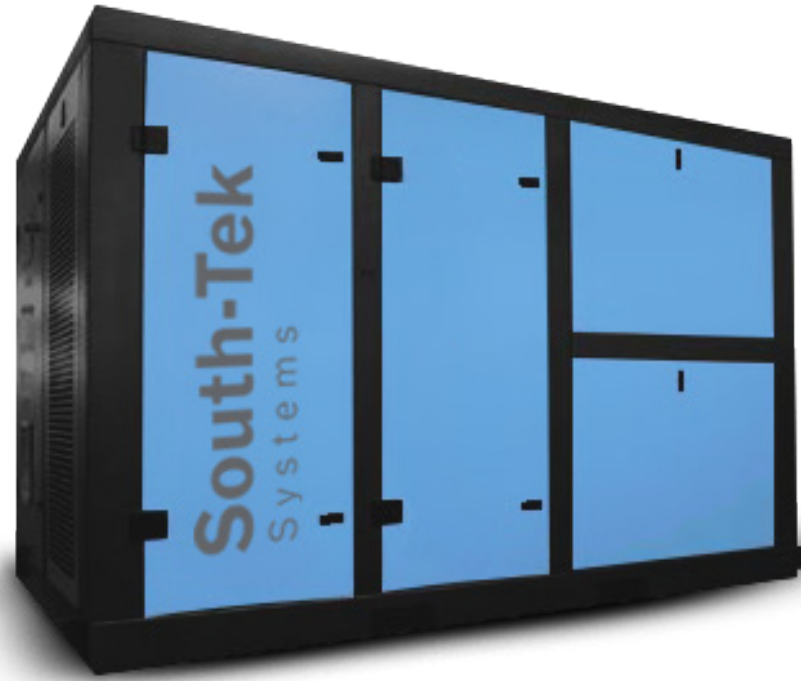


# Screw Air COMPRESSORS



# STSD & STSP Series

Direct Driven Screw compressors with or without Inverter



## Product Specification:

- Single stage oil lubricated screw block
- Air cooled after cooler
- Compressors of 75 kW and higher utilize radial fans for superior air and oil cooling, enhancing efficiency and minimizing noise. They are also controlled by an inverter.
- Electric motor insulation: Class F, protection class - IP 55, energy efficiency class IE3/IE4.
- Drive system is provided by elastic coupling attached to the air end and electric motor on the direct coupled models.
- Electrical panel is in accordance with CE and UL standards.
- System control panel has an LCD display showing compressor operation mode, pressure, and temperature readings.
- It also displays maintenance and replacement schedules for oil, oil filter, and separator filters, as well as maintenance schedules for screw blocks and motor ball bearings, warning parameter values, and more.
- Thermostatic mixing valve which controls the oil temperature.
- A proportional control valve ensures efficient compressor operation, saving energy and adjusting production based on air usage for a more systematic process.
- Pressure relief valve which ensures safety for the compressor and its user.
- Noise insulated enclosure
- Cabin covers which can be easily opened from every side.
- Performance data is in accordance with ISO 12:17 to 2009 annex C&E.
- Working noise level is measured as DB according to ISO 2151.

# Screw Air COMPRESSORS

## STSD Series Direct Drive Fixed Speed

South-Tek Model #	HP	CFM @ 100 PSI	CFM @ 125 PSI	CFM @ 218 PSI
STSD-30	30	134.55	110.53	76.28
STSD-40	40	175.16	156.44	113.71
STSD-50	50	216.13	193.52	137.37
STSD-60	60	265.21	238.37	169.51
STSD-75	75	330.9	290.99	197.06
STSD-100	100	434.02	405.77	280.4
STSD-125	125	518.42	473.57	330.55
STSD-150	150	688.28	614.12	425.19
STSD-180	180	829.54	719.36	515.59
STSD-200	200	952.79	861.68	619.07
STSD-250	250	1092.99	989.52	709.47
STSD-270	270	1266.38	1035.78	743.02
STSD-300	300	1543.96	1412.94	995.17
STSD-400	400	1738.89	1730.07	1266.03
STSD-475	475	1880	1854	N/A
STSD-545	545	2357.96	2105.11	N/A
STSD-600	600	2584.33	2334.65	N/A

## STSP Series Direct Drive Fixed Speed

South-Tek Model #	HP	CFM @ 100 PSI	CFM @ 125 PSI	CFM @ 218 PSI
STSP-30	30	157.86	141.26	91.11
STSP-40	40	195.64	175.16	129.96
STSP-50	50	240.85	215.77	161.39
STSP-60	60	303	276.16	199.53
STSP-75	75	399.06	366.21	240.49
STSP-100	100	529.37	478.16	316.77
STSP-125	125	615.53	554.44	405.06
STSP-150	150	778.34	699.58	492.99
STSP-180	180	904.06	810.47	574.57
STSP-200	200	1042.84	943.61	678.04
STSP-250	250	1266.38	1034.37	743.02
STSP-270	270	1483.57	1307.7	917.48
STSP-335	335	1786.57	1595.16	1121.24
STSP-425	425	2151.72	1933.12	1316.88

## STSD-VSD Series Direct Drive Variable Speed

South-Tek Model #	HP	CFM @ 100 PSI	CFM @ 125 PSI	CFM @ 218 PSI
STSD-15VSD	15	62.86	55.09	37.79
STSD-20VSD	20	85.11	74.16	49.09
STSD-25VSD	25	105.24	93.94	63.21
STSD-30VSD	30	134.55	110.53	76.28
STSD-40VSD	40	182.22	162.8	113.71
STSD-50VSD	50	222.48	199.17	141.26
STSD-60VSD	60	265.21	238.37	171.98
STSD-75VSD	75	334.43	300.88	204.47
STSD-100VSD	100	434.02	410.71	286.05
STSD-125VSD	125	518.42	473.57	332.66
STSD-150VSD	150	688.28	621.54	440.37
STSD-180VSD	180	829.54	719.36	515.59
STSD-220VSD	220	952.79	861.68	619.07
STSD-250VSD	250	1092.99	989.52	709.47
STSD-270VSD	270	1295.7	1035.78	743.02
STSD-335VSD	335	1584.22	1427.07	1013.88
STSD-425VSD	425	1783.74	1756.2	1266.03
STSD-475VSD	475	2159.49	1819.76	N/A

## STSP-VSD Series Direct Drive Variable Speed

South-Tek Model #	HP	CFM @ 100 PSI	CFM @ 125 PSI	CFM @ 218 PSI
STSP-15VSD	15	72.75	60.74	N/A
STSP-20VSD	20	100.65	84.4	N/A
STSP-25VSD	25	127.13	109.48	N/A
STSP-30VSD	30	157.86	141.26	91.11
STSP-40VSD	40	195.64	175.16	129.96
STSP-50VSD	50	240.85	215.77	161.39
STSP-60VSD	60	303	276.16	199.53
STSP-75VSD	75	399.06	366.21	240.49
STSP-100VSD	100	529.37	478.16	316.77
STSP-125VSD	125	615.53	554.44	405.06
STSP-150VSD	150	778.34	699.58	492.99
STSP-180VSD	180	904.06	810.47	574.57
STSP-220VSD	220	1042.84	943.61	678.04
STSP-250VSD	250	1266.38	1034.37	743.02
STSP-270VSD	270	1483.57	1307.7	917.48
STSP-335VSD	335	1786.57	1595.16	1121.24
STSP-425VSD	425	2151.72	1933.12	1316.88
STSP-475VSD	475	2278.86	1967.38	N/A
STSP-535VSD	535	2593.16	2197.98	N/A
STSP-600VSD	600	2423.65	2088.86	N/A

# STSP2 Series

## Two Stage Rotary Screw Air Compressors



When assessing business productivity, it's important to consider the overall costs of the compressed air system throughout its lifespan. South-Tek's Two Stage Rotary Screw series is designed to deliver maximum efficiency and energy savings for your business. The STSP2 series prioritizes machine safety with its soft start inverter, while also eliminating wasted energy and offering potential cost savings of up to 35%. Notably, this series operates at two stages of pressure, ensuring high efficiency and reducing specific power usage by 7-8% compared to single-stage screw compressors.

### Product Specification:

- Two stage oil lubricated screw block
- Air cooled after cooler
- Compressors of 75 kW and higher utilize radial fans for superior air and oil cooling, enhancing efficiency and minimizing noise. They are also controlled by an inverter.
- Electric motor insulation: Class F, protection class - IP 55, energy efficiency class IE3/IE4.
- Drive system is provided by elastic coupling attached to the airend and electric motor on the direct coupled models.
- Electrical panel is in accordance with CE and UL standards.
- System control panel has an LCD display showing compressor operation mode, pressure, and temperature readings. It also displays maintenance and replacement schedules for oil, oil filter, and separator filters, as well as maintenance schedules for screw blocks and motor ball bearings, warning parameter values, and more.
- Thermostatic mixing valve controls the oil temperature.
- A proportional control valve ensures efficient compressor operation, saving energy and adjusting production based on air usage for a more systematic process.
- Pressure relief valve ensures safety for the compressor and its users.
- Noise insulated enclosure
- Cabin covers which can be easily opened from every side.
- Performance data is in accordance with ISO 12:17 to 2009 annex C&E.
- Working noise level is measured as DB according to ISO 2151.

### STSP2 Series

South-Tek Model #	HP	CFM @ 100 PSI	CFM @ 125 PSI	CFM @ 218 PSI
STSP2-30	30	177.99	161.03	N/A
STSP2-40	40	243.32	196.35	N/A
STSP2-50	50	296.29	257.44	N/A
STSP2-60	60	360.21	315.01	N/A
STSP2-75	75	473.22	390.93	N/A
STSP2-100	100	535.37	530.43	N/A
STSP2-125	125	776.92	662.15	N/A
STSP2-150	150	901.94	765.62	N/A
STSP2-180	180	1123.36	894.17	N/A
STSP2-220	220	1196.81	1111.35	N/A
STSP2-270	270	1545.72	1386.1	N/A
STSP2-335	335	1954.31	1735.01	N/A
STSP2-425	425	2207.87	2136.18	N/A
STSP2-475	475	2436.36	2312.4	N/A

South-Tek reserves the right to alter the given data without prior notice.  
 FAD: Free Air Delivery  
 FAD is measured according to ISO 1217:2009 Annex C&E

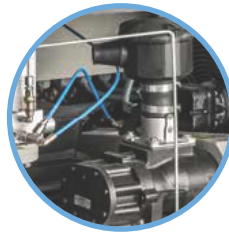
### STSP2-VSD Series

South-Tek Model #	HP	CFM @ 100 PSI	CFM @ 125 PSI	CFM @ 218 PSI
STSP2-30VSD	30	177.99	161.03	N/A
STSP2-40VSD	40	243.32	196.35	N/A
STSP2-50VSD	50	296.29	257.44	N/A
STSP2-60VSD	60	360.21	315.01	N/A
STSP2-75VSD	75	473.22	390.93	N/A
STSP2-100VSD	100	535.37	530.43	N/A
STSP2-125VSD	125	776.92	662.15	N/A
STSP2-150VSD	150	901.94	765.62	N/A
STSP2-180VSD	180	1123.36	894.17	N/A
STSP2-220VSD	220	1196.81	1111.35	N/A
STSP2-250VSD	250	1545.72	1386.1	N/A
STSP2-270VSD	270	1954.31	1735.01	N/A
STSP2-335VSD	335	2207.87	2136.18	N/A
STSP2-425VSD	425	2436.36	2312.4	N/A

# Two Stage Rotary Screw Air COMPRESSORS

# STS Series Belt Driven Screw Compressors

The South-Tek STS Series screw air compressors are belt driven and are specifically designed to meet space restrictions. The package is seated on rubber wedges that are directly connected to the chassis to reduce noise and vibration. The pressure range of the STS Series compressor is 100-218 PSI.



## STS Series Belt

South-Tek Model #	HP	CFM @ 100 PSI	CFM @ 125 PSI	CFM @ 218 PSI
STS-5	5	23.66	20.13	N/A
STS-7.5	7.5	32.14	28.25	N/A
STS-10	10	43.08	37.79	21.54
STS-15	15	64.27	57.21	39.55
STS-20	20	87.93	77.69	51.56
STS-25	25	106.3	95.7	66.04
STS-30	30	135.96	121.13	81.93
STS-40	40	182.93	163.86	115.48
STS-50	50	222.48	200.23	141.61
STS-60	60	268.39	242.26	174.45
STS-75	75	337.26	301.59	204.47
STS-100	100	441.43	401.53	287.11

South-Tek reserves the right to alter the given data without prior notice.  
 FAD: Free Air Delivery  
 FAD is measured according to ISO 1217:2009 Annex C&E

## Product Specification:

- Operating pressure 100/125/218 PSI
- Single stage oil injected airend
- Air/Oil aftercooler
- Driven by a V-Belt and pulley
- System control panel has an LCD display showing compressor operation mode, pressure, and temperature readings. It also displays maintenance and replacement schedules for oil, oil filter, and separator filters, as well as maintenance schedules for screw blocks and motor ball bearings, warning parameter values, and more.
- Control Panel equipped with our micro-processor.
- Air suction control valve and piston
- Thermostatic mixing valve controls the temperature.
- Pressure relief valve which ensures safety for the compressor and its user.
- Noise insulated enclosure
- Cabin covers, which can be easily opened from every side.
- Performance data is in accordance with ISO 1217 Annex C-2009.

# Screw Air COMPRESSORS

# STS-T & STS-TD Series Belt Driven Receiver Mounted Screw Compressors

The SouthTek STS-T Series screw air compressors are specifically designed to meet space restrictions. They come enclosed in a silent canopy to reduce noise in an already loud environment. Operating within an air pressure range of 100-218 PSI, these compressors are widely used across various industrial sectors. Additionally, models with integrated dryers and filters are also available.

## STS-T Series Receiver Mounted

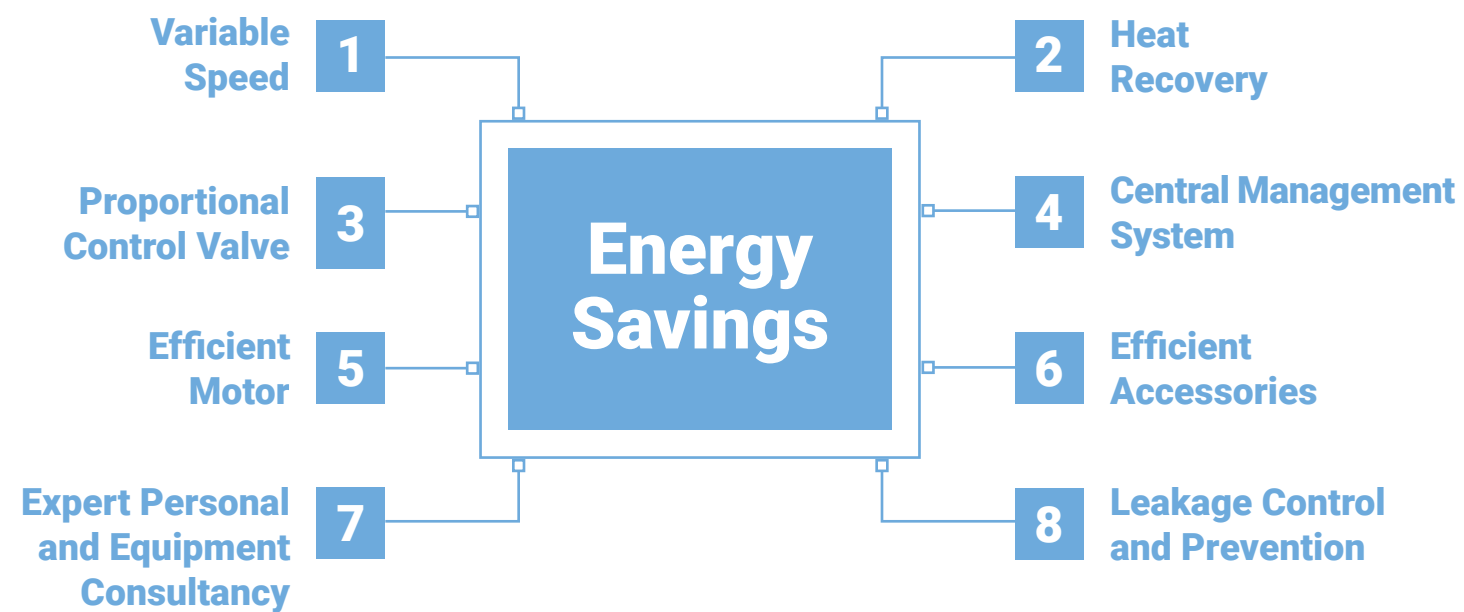
South-Tek Model #	HP	CFM @ 100 PSI	CFM @ 125 PSI	CFM @ 218 PSI
STS-5T	5	23.66	20.13	N/A
STS-7.5T	7.5	32.14	28.25	N/A
STS-10T	10	43.08	37.79	21.54
STS-15T	15	64.27	57.21	39.55
STS-20T	20	87.93	77.69	51.56

## STS-TD Series Receiver Mounted with Air Dryer

South-Tek Model #	HP	CFM @ 100 PSI	CFM @ 125 PSI	CFM @ 218 PSI
STS-5TD	5	23.66	20.13	N/A
STS-7.5TD	7.5	32.14	28.25	N/A
STS-10TD	10	43.08	37.79	21.54
STS-15TD	15	64.27	57.21	39.55
STS-20TD	20	87.93	77.69	51.56

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 FAD: Free Air Delivery  
 FAD is measured according to ISO 1217:2009 Annex C&E



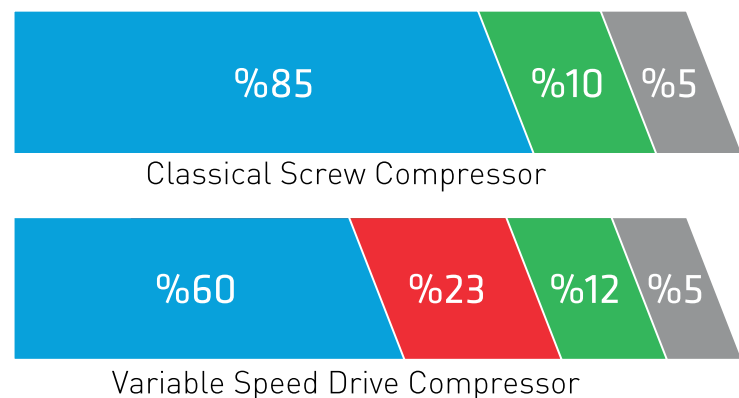


# 1 Cost Effective Compressed Air Production with Variable Speed Control

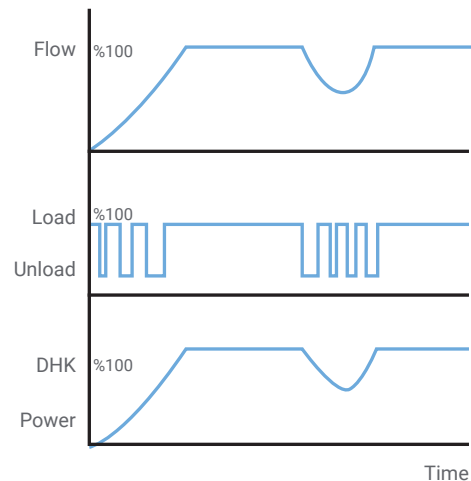
In the case of classic oil-injected load/idle compressors, the compressor consumes full power in load operation, while it consumes unnecessary energy in its idle state. In South-Tek VSD series compressors, the inverter adjusts the motor speed based on the air consumption. Depending on the motor revolution, the power drawn from the network varies.

South-Tek centrifugal fan compressors, the cooling fan saves extra energy by controlling the speed with the inverter.

365 days / year, 12 hours / day, \$.10 / kWh, 90kW South-Tek VSD compressor with 70% air production specifications provides a profit of \$14,337 per year.



Energy Costs, Investment Costs, Service & Maintenance Costs, Energy Savings



# 2 Heat Recovery System

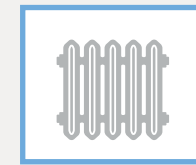
In oil-injected compressors, the heat generated after the air and oil are compressed in the screw and the heat generated by the electric motor can be saved as energy. This heat energy allows the hot air to be directed through the hood to provide ambient heating. Additionally, hot water can be obtained by heat gain exchangers added to the oil and air circuits. The obtained hot water can be used in the process or in the radiator to be used as an ambient heater. As a result, 91% of the disposed heat energy will be recovered.



Process



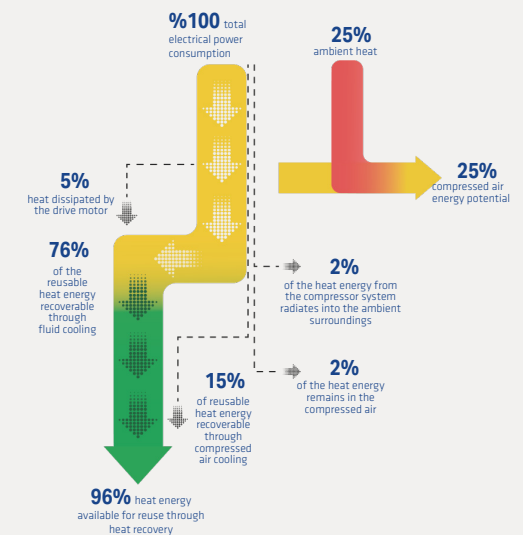
Hot Water



Heating



Warm Air for Ambient Heating



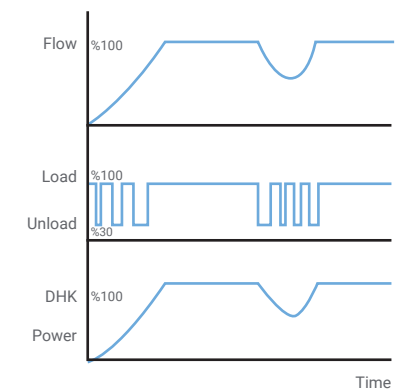
$$\text{Energy Gain (kCAL / year)} = 0,91 \times \text{Compressor Power (kW)} \times \text{Annual Operating Hours (Hour)} \times 0,25 \text{ €/kWh}$$

$$\text{Engine Efficiency } 0,91 \times 90 \text{ kW} \times 3600(\text{h}) \times 0,25\text{€/kWh Energy Gain (kCAL / year)} = 77.589 \text{ €/Year } 0,95$$

# 3 The Application of Proportional Control Valve

In load/idle compressors, the suction flap is controlled by a proportional control valve and brought to an intermediate position when the desired pressure is approached.

Due to the flap in the intermediate position, the compressor does not go into idle state, therefore unnecessary energy loss in the idle state is reduced. Also, a stable pressure is achieved.



$$\text{Savings Calculation} = \text{Percentage of Consumption} \times \text{Compressor Power (kW)} / \text{Motor Efficiency} \times \text{Yearly Operating Hours (Hour / Year)} \times \text{Proportional Control Valve Efficiency} = 0.7 \times (90 \text{ kW} / 0.95) \times 3600 \text{ Hours / Year} \times 0.15 = 35810 \text{ kWh / Year}$$

$$\text{Financial Saving} = \$.10 / \text{kWh} \times 35810 \text{ kWh / Year} = \$3,581.77 \text{ Year Proportional Control Valve Efficiency was established at 15\% at 70\% consumption.}$$

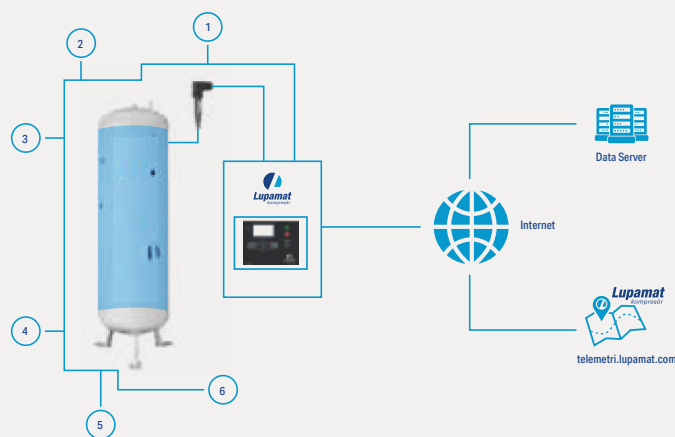
Due to the prolonged time spent in load state, the working life of bushings and flaps of pneumatic systems and suction control valve is extended.



## 4 Central Management System

The central management system interacts with the South-Tek control panels at various compressor stations, activating compressors based on consumption needs and their age. This prevents energy loss from unnecessary compressor activation. It also equalizes the operating hours of compressors with similar power, enabling effective maintenance planning.

Remote Monitoring System allows easy monitoring of compressor maintenance times, failure records, pressure, and temperature information. Via the Remote Monitoring System, predictive maintenance can be carried out, and the blockages at air or separator filters can be detected. Unforeseen downtimes can be prevented by detecting possible problems in advance.

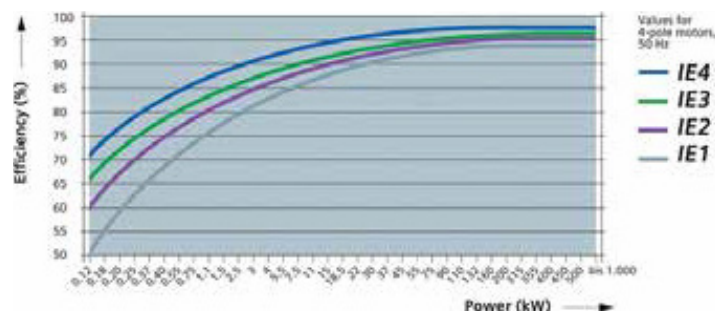


## 5 Central Management System

The main engines and fan motors are used in screw compressors. The efficiency of these motors are classified as IE1, IE2, IE3, IE4 according to IEC60034-2-1. These efficiencies vary based on motor brand and type. South-Tek compressors use IE3 / IE4 efficient motors for STSD & STSP series.



Energy Consumption Calculation = Motor Power (kW) / Motor Efficiency x Yearly Operating Hours (Hour / Year) x Electricity Unit Price (€ / kWh) 3.1% energy gain from using IE4 efficiency class engine instead of IE1.



## 6 Efficient Accessory Use



**Coupling:** In belt/pulley mechanisms, efficiency loss due to friction is 1-2%. These losses can be avoided by using couplings.



**Air / Oil Separator:** South-Tek brand air / oil separators provide long-term use, lower resistance and lower oil consumption. Inefficiencies caused by pressure loss due to poor quality or clogged separator leads to 3% increased cost.



**Air Filter:** Mann / Hummel brand air intake filters ensure long-term operation and lower resistance. The blockage status of the filter can be monitored from the screen via the 50 mbar blockage sensor. A compressor operating with a clogged filter (100 mbar) causes 10% inefficiency in air production.



**Oil Filter:** South-Tek brand oil filters provide long-term use and efficient particle filtration. These filters prolong the oil life. The clogging status of the filter can be monitored via the sensor that detects the blockages at the filter. Due to the lack of adequate lubrication in a compressor operating with a clogged oil filter, the temperature will rise and the screw rotors will be damaged. Our filters have a bypass feature as standard.

## 7 Central Management System

Choosing the right compressor according to the facility's changing needs for flow, pressure, air quality and consumption is essential. We work with you to: Design and select the appropriate compressor housing, consult on installation of in-house pipelines, measure and analyze the current capacity, predict air consumption, and conduct cost analysis for the future based on this recorded data. Real consumption flow rate is also measured via a thermal mass measurement method.

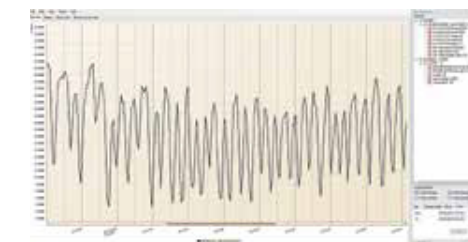


Additional pressure losses due to clogging of the dryer filters are also cause for extra energy consumption. For this reason, it should be preferred that the filters have pollution indicator.

South-Tek Compressor has 1 Year standard warranty for all Rotary Screw Products

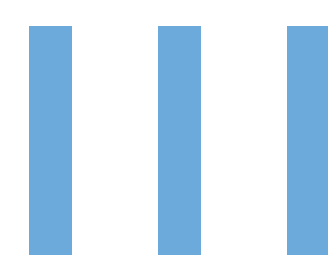
The warranty periods vary depending on model from 6 years to Lifetime Airend Warranty.

For chosen compressors with wrong pressures ( 10Bar - 7.5Bar ); = 0.7 x 15,7kW x 3600 Hour/Year = 39564 kWh/Year Earnings = 39564kWh/Year x 0,25 € / kWh = 9.891 € 90kW compressor selection, 70% consumption, Electricity Unit Cost 0,25 € / kWh



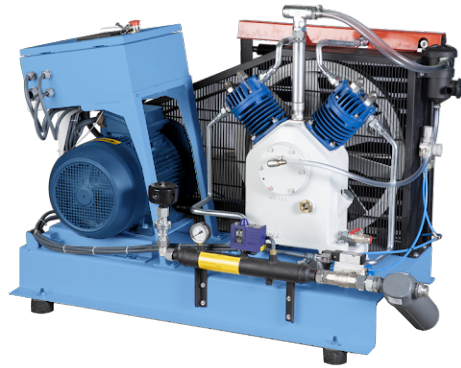
Cumulated Analysis of Compressor-Energy and -Costs

Parameter	Value
Compressed Air	1000000 m³
Total Flow rate	1000000 m³/h
Level of storage	1000000 m³



The South-Tek booster compressors offer efficiency and cost-effectiveness, featuring suction pressure options of 100, 125, and 150 PSI, and an air outlet pressure of 580 PSI. These boosters are engineered for continuous operation in even the most challenging conditions, catering to PET and food product production applications, as well as various industrial sectors. Their design, incorporating concentric suction and delivery valves, ensures maximum efficiency and a long lifespan.

The compressor cylinders and crankshaft are manufactured in a single-piece ductile iron material, ensuring easy maintenance and repair. These cast parts undergo thermal heating, stress relief, and precision machining to meet strict tolerances, and they are rigorously tested for quality. The unit is primarily showcased with the pistons assembled onto the cylinders and body, and then mounted onto the solid chassis. A fan, located on the flywheel, air-cools the machine. The compressor is driven by a V-belt and an electric motor, with easily adjustable tensioners. The entire assembly, including all components, is protected by a cabin covered with noise isolation material. Access doors on the enclosure allow easy accessibility from every side during maintenance and repair.



South-Tek Model #	HP	Inlet Pressure	CFM @ 580 PSI	Rotation RPM	Dimensions W x L x H
STS40-15	15	100 PSI	110	800	19.5x.41.33x35.5
STS40-15	15	145 PSI	143	800	19.5x.41.33x35.5
STS40-20	20	190 PSI	182	800	19.5x.41.33x35.5
STS40-20	20	100 PSI	166	800	19.5x.41.33x35.5
STS40-20	20	145 PSI	215	800	19.5x.41.33x35.5
STS40-25	25	190 PSI	273	800	19.5x.41.33x35.5

## Product Specification:

- Low RPM
- The body cylinder and crankshaft come in a single piece of stress-relieved Eng JS600-3 ductile iron casting, designed to be compact.
- Featuring an efficient cooling and lubrication setup.
- Our reciprocating compressors feature spherical valves with actuators that regulate air flow. These valves are positioned at the air intake and discharge areas. They are designed to operate efficiently even when the compressor is unloaded.
- Needle bearings are used to assemble the connecting rod and crankshafts.
- The motors are equipped with insulation rated Class F and come with IP55 Protection class. They also have IE3/IE4 energy efficiency.
- Electric panels are made in compliance with CE and UL standards.
- The control panel is furnished with an LCD display and microprocessor, and it also includes an emergency stop button. The LCD screen displays the compressor's operating mode, pressure and temperature readings, maintenance timetables, and diagnostic information.
- Includes pressure safety valve and low-pressure switch for added safety.
- The air compressor booster ensures flawless, secure, and trouble-free operation.

## Booster

# COMPRESSORS



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