

TS Series— Rotary Screw Air Compressors 100-600 HP



**Sullair's Tandem
Compressors
Extend Bearing
Life**

TS-20
100-200 HP

TS-32
200-350 HP

TS-32S
400-600 HP

**SULLAIR TANDEM
TRIMS POWER
COSTS \$20,000
A YEAR FOR TOOL
MANUFACTURER**

**SULLAIR TANDEM
COMPRESSOR IS KEY
COMPONENT.**

**Electronics
manufacturer
saves \$206,910
annually with
new energy
system.**

By dividing the compression ratio across two stages, the two-stage tandem will significantly exceed the life of the average compressor.

SOUTHBRIDGE, MA —
Hyde Manufacturing Company sums up its mission as: "Day after day, in every cutting job, Hyde gives America the edge it needs." Helping to give Hyde the edge it needs in today's competitive marketplace is its state-of-the-art Sullair compressed air system.

Sullair responds to energy-conscious market with new generation of tandem compressors.

A company-wide energy efficient System that has yielded significant savings.

BUSINESS — April, 1984

**Sullair
takes "sting"
out of energy
costs**

Sullair compressors offer 2-year payback in energy savings

March 1, 2001 — Sullair introduces its newly designed line of two-stage tandem rotary screw air compressors.

Energy efficiency and two-stage durability.



THE SULLAIR TWO-STAGE SINGLE STAGE V

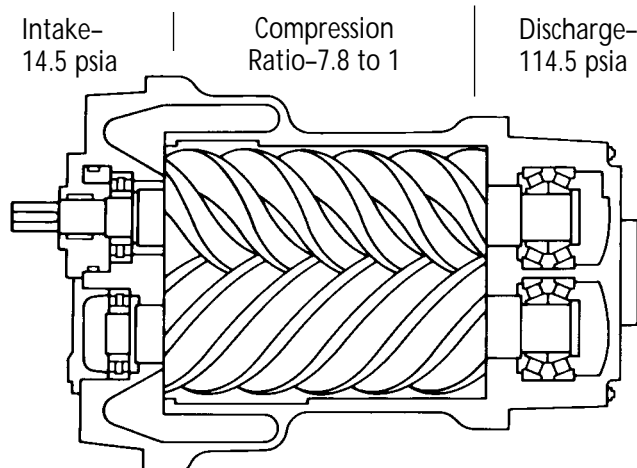
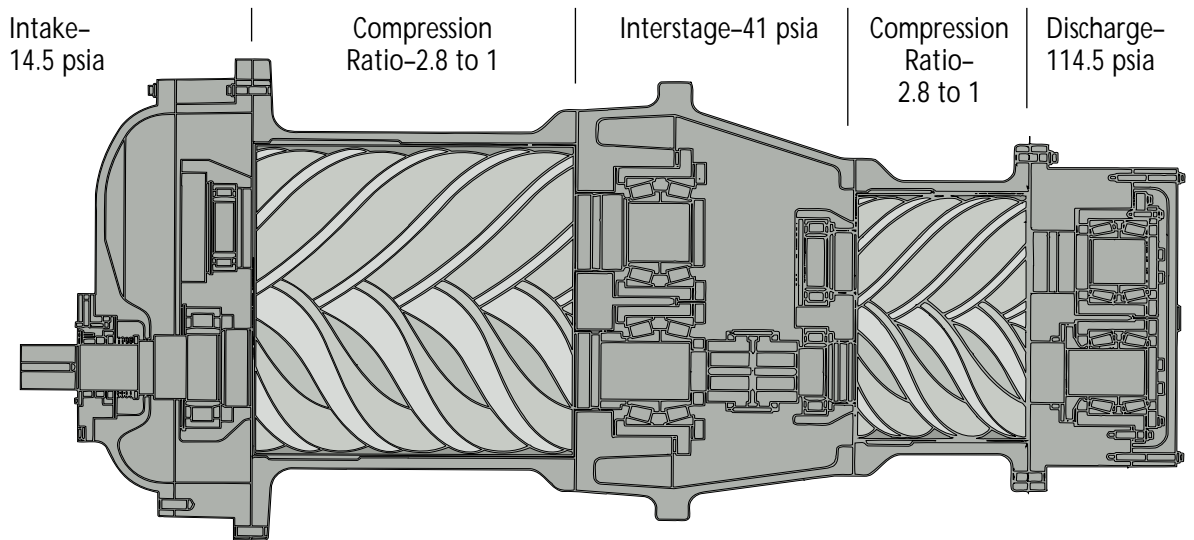
WHY TWO-STAGE TANDEM COMPRESSORS

Two-stage compressors have a power advantage over equivalent size single-stage compressors of 11 to 13 percent for two key reasons:

1. Compression is divided between the two stages.
In a single stage compressor operating at 100 psig at sea level, the compression ratio is 7.8 to 1 (in absolute terms). A

two-stage compressor operating at the same pressure will have a compression ratio of 2.8 to 1 in each stage (2.8 is the square root of 7.8) achieving the compressor's power savings.

2. Internal leakage losses are reduced.
Reduced pressure difference across each stage facilitates reduction in leakage losses.



TANDEM COMPRESSOR. VS. TWO-STAGE.

SULLAIR'S SUPERIOR END-TO-END DESIGN

Sullair's TS two-stage tandem compressors use two sets of rotors arranged in a unique end-to-end design that achieve higher efficiencies than other two-stage rotor arrangements. This design is based on Sullair's proven technology used in its single-stage units, which has set the standards for efficiency and reliability in single-stage compressors for more than 3 decades.

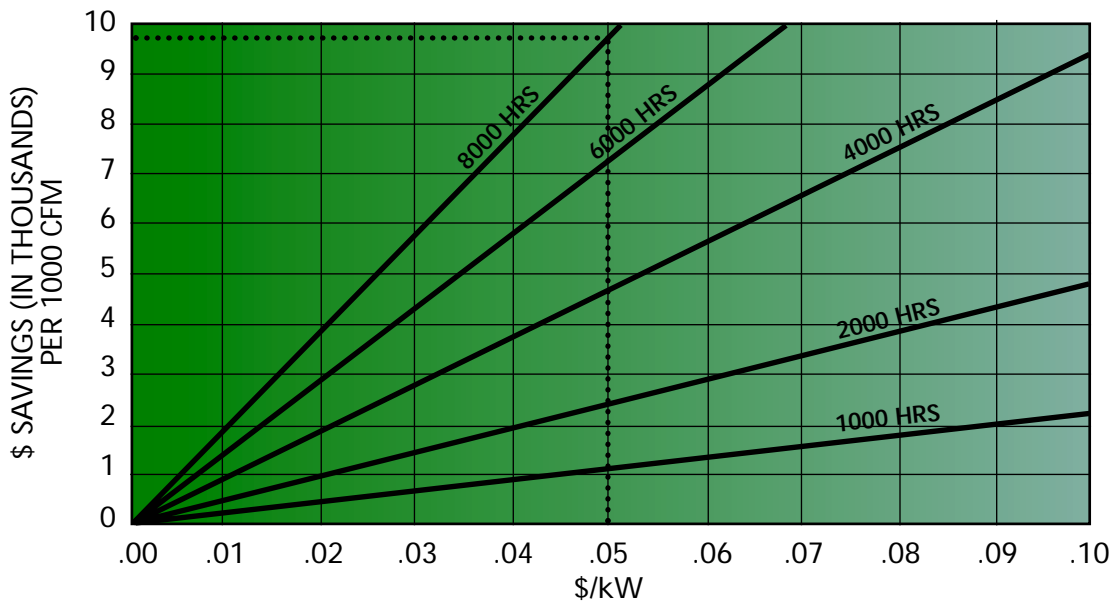
Introduced in 1984, the Series TS tandem compressors offer unmatched full-load efficiency;

often providing a two-year pay-back in energy savings compared with a single-stage compressor. With the tandem's spiral valve capacity control, further operating efficiencies can be achieved during part-load operation.

Extended bearing life

By dividing the compression ratio across two stages, the two-stage tandem will significantly exceed the life of the average single-stage compressor.

Power Savings per 1000 cfm



Power savings per 1000 cfm. Two-stage tandem vs single-stage rotary screw at full load. At a power cost of \$.05/kW/hr, the fine dotted line shows that a tandem two-stage compressor will save \$9600 per 1000 cfm over a single-stage compressor operating for 8000 hours at 100 psig. For 1500 cfm, multiply by 1.5 for savings of \$14,400.

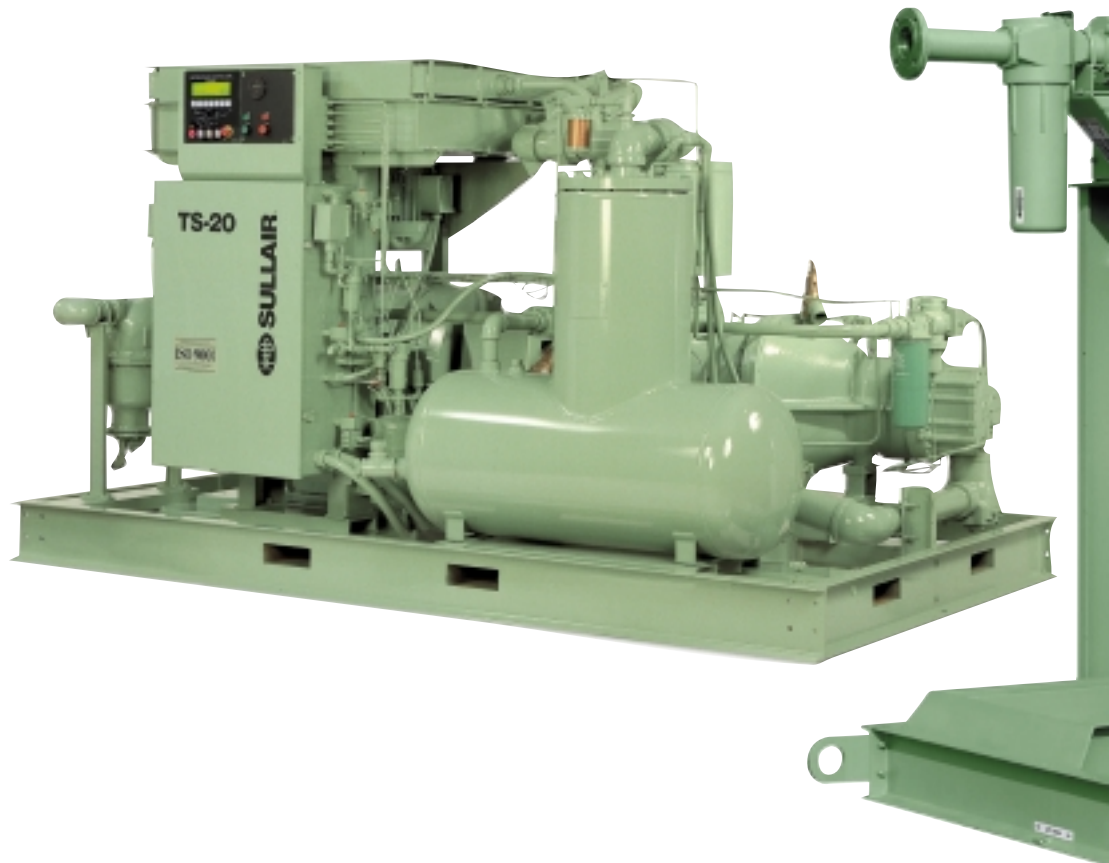
DURABILITY AND RELIABILITY SULLAIR TANDEM

Two asymmetrical lobe profile rotors in each compressor stage are the only major moving parts in the compressor air end.

Proven dependability
with more than 150,000 Sullair compressors in use around the world. Time-tested air-ends have been running since 1965.

Rotary screw reliability
These TS models use a two-stage rotary screw air end, featuring Sullair's rugged bearing design: tapered roller bearings on the discharge end and cylindrical roller bearings on the inlet for high load carrying capacity. On standard TS models, the air-end is warranted for 5 years⁽¹⁾. On TS 24KT™ models, the air-end is warranted for 10 years⁽²⁾.

- (1) Sullair's 5-year warranty also includes motor, air/fluid receiver and cooler(s). "L" and "H" models only.
- (2) Sullair's 24KT warranty also includes 5 years on the motor, air/fluid receiver and cooler(s).



RELIABILITY ARE BUILT INTO THE AIR COMPRESSOR.

Continuous duty

The Sullair TS-20 and TS-32 have established themselves as highly efficient compressors in the 100 to 600 hp range. They offer the inherent reliability of Sullair's rotary screw design and provide continuous duty performance. With spiral valve capacity control, additional energy savings can be achieved during part-load operation.

Best warranties in the industry



EMERALD
5-Year
Warranty



24KT™
10-Year
Warranty



THE SULLAIR TS-20,

① Two-stage compressor air end

Reduces power consumption.
Extends air end bearing life.

End-to-end design

Reduces pressure drop through stages.
Easier serviceability.

② Spiral valve capacity control

Lowers part-load operating costs.
Reduces cycling duty on package.
Maintains consistent plant pressure.
Simple control.
Reduces bearing load.

Sullair Supervisor™

State-of-the-art technology.
Four-line, full text display.
Accurately monitors and controls the compressor.
Computer-based controller allows sequencing of multiple compressors and communication capability.
Service and preventative maintenance information built into the controller.

③ Multi-stage air fluid separation

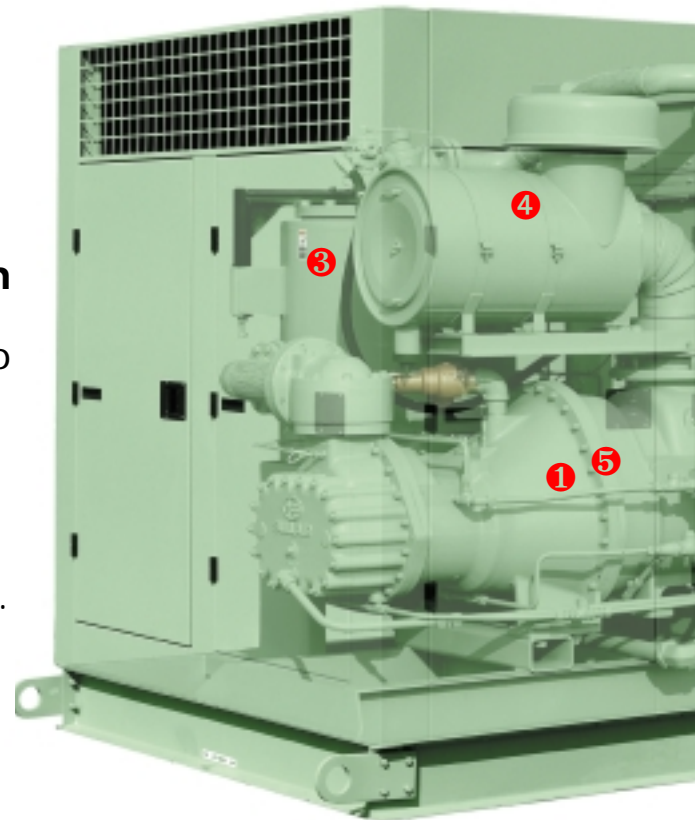
Dual nested Optimizer™ separator elements, reduce fluid carry-over to a maximum of 1 ppm.
Reduced carryover lowers make-up fluid costs.
Pleated Optimizer elements lower initial pressure drop for greater efficiency and extends element life.
Easy to change with built-in lid lifting device.

④ Optimalair™ heavy-duty air intake filter

Includes remote air intake connection.
Protects premature failure of key components.
Extends separator, filter and fluid life.

Fiberglass fluid filter

Composite glass media, coreless element provides better filtration, and ease of disposal.
Up to 20% more efficient than conventional paper elements.
Lengthens life of the compressor.



TS-32 AND TS-32S.

5 Interstage Cooling Process

Absorbs heat of compression.
Dramatically reduces power costs.

6 Integral Air-Cooled Oil and Aftercoolers

With large, hinged cooler clean-out ports (through 450 HP).

Versatile Control System

Matches output to demand.
Stabilizes system pressure.
Minimizes need for an air receiver.
Extends package life.

Bearing Fluid Reservoirs

Ensure that fluid is available at startup.
Extend air end life.

Select one of these long-life fluids... Sullube™ is standard factory fill.

Biodegradable.
One year or 8000 hour service life.
Reduces fluid disposal costs.

24KT™ is optional.

Exclusive 10-year air end warranty.
Eliminates annual fluid changes.
Eliminates annual fluid disposal costs.

Free fluid sampling and analysis program with either fluid.

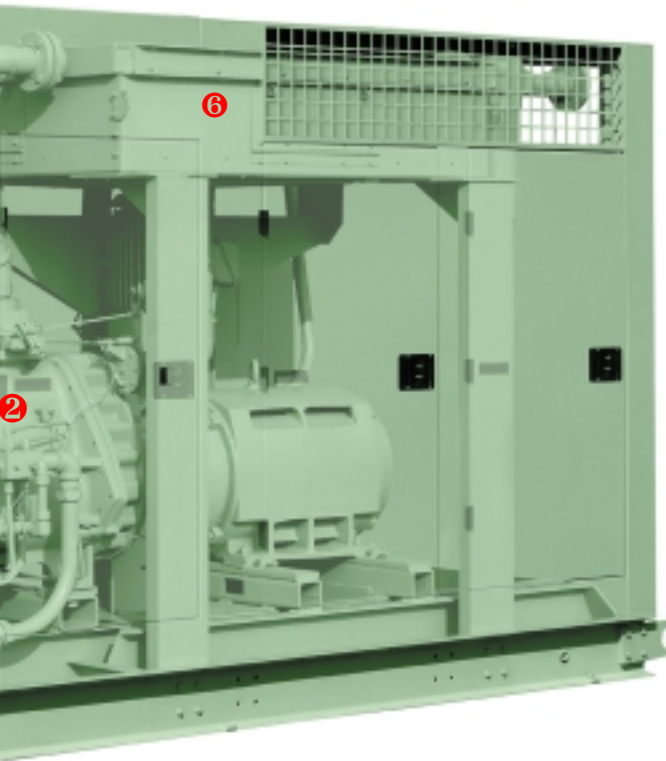
Motor and compressor are direct coupled

Motor coupled to air-end through non-lubricated, flexible coupling.
Allows use of standard NEMA frame motor.
Simplifies installation and start-up.

Easy Maintenance

Access to all critical components even with a sound enclosure installed.

O-Ring Oil Connection, Discharge Flex, Flanges, Tube and Tube Fittings





The reliable Sullair air-end

Decades of proven reliability are testimony to the quality of the Sullair air end.

Although the principle of rotary screw compression remains the same, Sullair is continually improving materials, engineering and design of its air ends and compressor packages.

No loss of capacity or efficiency

Sullair air ends have only two moving parts: the asymmetrical profile rotors. Contact occurs only on a lubricated pitchline, so wear is virtually eliminated. As a result, Sullair compressors do not lose capacity or efficiency.

Longer air end life

Controlled pressure lubrication and BFR (Bearing Fluid Reservoirs) assure a reliable supply of fluid to rotating elements.

Lower operating costs

Discharge port matches ratios of volume and operating pressure for maximum efficiency. Axial air inlet avoids preheating inlet air for further savings.

Air-end exchange program

If your Sullair compressor requires a replacement air-end, Sullair will provide one with updated components featuring the latest technology. The replacement air-end is factory warranted and is easy to install.



Sullair Supervisor™ Controller microprocessor controller—Sullair Supervisor Deluxe II is standard on LS-32

Compatible and user-friendly

Computer-compatible microprocessor controller has simple graphic illustration of monitored functions and an easy-to-read keypad.

Featuring:

- Constant readout of pressure and temperature.
- On-demand readout of all operating and maintenance conditions.
- Monitors key functions and safety shutdowns.
- Power failure auto re-start.

- Dual control, provides automatic start-stop operation.
- Lead-lag and sequencing with multiple compressors.
- Service and preventative maintenance schedule.
- “Run”, “Loaded” and “Consumable Parts” hours.
- Fault history with sensor readings.
- “Help” key provides built-in trouble shooting.

Two-way communications

RS 485 and RS 232 communications ports allow for several communication and remote monitoring/control options.

Air quality is one of the best in the industry

While others claim a low carry-over or 5 ppm, Sullair’s TS compressors offer a carry-over rate of less than 1 ppm, the lowest in the industry. Sullair’s MSS design uses a sump design which allows use of oversized dual nested separators.



Sullair Optimizer™ Air/Fluid Separator

A high-efficiency separator that will pay for itself (during the life of the separator) in reduced compressor fluid carry-over and electrical power consumption.

Premium efficient motor with 5-year warranty



Improved energy conservation

These premium efficiency motors are designed and manufactured in the U.S.A. to meet North America’s ever increasing need for improved energy conservation and product reliability. Motors are direct-coupled to allow use of standard NEMA frame motors and to simplify installation and start-up.

Inverter grade insulation system

This new insulation system, designed to meet NEMA MG1 Part 31.40.4.2 standards, provides even more energy savings.

Sullair Sullube™ standard long-life compressor fluid



Environmentally compatible
Sullube™ is a biodegradable fluid that is recyclable. Low levels of Sullube carried over in condensate may be accepted for direct sewer disposal without additional separation/equipment. Contact local authorities for approval.

8,000-hour fluid
Because Sullube can operate for three full shifts for one year, labor related to fluid change-out and associated downtime costs during this time are virtually eliminated.

Non-varnishing
Because of its unique chemical formulation, Sullube will not varnish.

Longer fluid life
Unique additive package maintains desired characteristics over a wide range of operating conditions for extended periods.

Sullair 24KT™ compressor fluid and the 10-year warranty



10-year air-end warranty
24KT fluid formulation is so revolutionary, Sullair is the only compressor manufacturer to offer this unprecedented.

Routine fluid disposal costs are eliminated
There is no foreseeable end to the useful life of 24KT fluid, when used according to Sullair recommendations. Fluid-related maintenance costs are drastically reduced.

24KT Fluid extends compressor component life
24KT is chemically inert and does not break down or varnish. It works clean. Filters, separators and coolers will not plug. Bearings last longer. Associated labor costs are also reduced.

Compressor operates at peak performance
Constant viscosity insures excellent lubrication to all rotating parts.

Standard features and options

| | TS-20 100-200 HP | TS-32 200-350 HP | TS-32S 400-600 HP |
|---|---------------------|---------------------|----------------------|
| Sullair Supervisor Controller | ● | ● | ● |
| Direct Coupled | ● | ● | ● |
| Highly Efficient Air/Fluid Separation | ● | ● | ● |
| Fiberglass Fluid Filter | ● | ● | ● |
| Optimalair™ Intake Filter | ● | ● | ● |
| Sullube™ 8000 Hour Compressor Fluid | ● | ● | ● |
| Optimizer™ Separator | ● | ● | ● |
| Bearing Fluid Reservoir | ● | ● | ● |
| Sullair's Versatile Control System | ● | ● | ● |
| TEFC Premium Efficient Fan Motor | ● | ● | ● |
| Emerald 5-year Health Assurance ⁽¹⁾ | ● | ● | ● |
| Wye Delta Starter ⁽²⁾ | ● | ● | ● |
| SCD Zero Air Loss Condensate Drain | ● | ● | ● |
| ODP Premium Efficient Motor ⁽³⁾ | ● | ● | ● |
| Full Voltage Starter | ● | ● | ● |
| 24KT™ (10-Year Air End Warranty) ⁽⁴⁾ | ● | ● | ● |
| Sound Attenuating Enclosure | ● | ● | ● |
| Cold Weather Package | ● | ● | ● |
| Energy Efficiency System | ● | ● | ● |
| Electro-Mechanical Controls | ● | ● | ● |
| Solid State Starter | ● | ● | ● |
| TEFC Premium Efficient Motor | ● | ● | ● |

● = Standard ● = Option

⁽¹⁾ Sullair's 5-year warranty includes air end, motor, air/fluid receiver and cooler(s). "L" and "H" models only.

⁽²⁾ Standard on TS-32, 200-450 hp and optional on TS-32S, 500-600 hp

⁽³⁾ Standard on TS-32, 200-350 hp and optional on TS-32S, 400-500 hp

⁽⁴⁾ Sullair's 24KT warranty includes 5 years on the motor, air/fluid receiver and cooler(s). "L" and "H" models only.

Specifications

| TS-20, 60Hz | 100L | 100H | 125L | 125H | 125HH* | 125XH* | 150L | 150H | 150HH* | 150XH* | 200L | 200H | 200HH* | 200XH* |
|-------------------------------|------|------|------|------|--------|--------|------|------|--------|--------|------|------|--------|--------|
| Compressor Performance | | | | | | | | | | | | | | |
| Full Load Pressure (psig) | 100 | 125 | 100 | 125 | 150 | 175 | 100 | 125 | 150 | 175 | 100 | 125 | 150 | 175 |
| Capacity (acfm) | 575 | 500 | 680 | 615 | 575 | 500 | 826 | 763 | 680 | 616 | 1035 | 960 | 826 | 776 |
| Motor (hp) | 100 | 100 | 125 | 125 | 125 | 125 | 150 | 150 | 150 | 150 | 200 | 200 | 200 | 200 |
| Dimensions and Weights | | | | | | | | | | | | | | |
| Length (in) | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Width (in) | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 |
| Height (in) | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 |
| Weight (lb) | 8100 | 8100 | 8200 | 8200 | 8200 | 8200 | 8400 | 8400 | 8400 | 8400 | 8600 | 8600 | 8600 | 8600 |

* "HH" and "XH" Models not available with 24KT.

| TS-32, 60Hz | 200L | 250L | 250H | 250HH* | 300L | 300H | 300HH* | 300XH* | 350L | 350H | 350HH* | 350XH* | 350ZH* |
|-------------------------------|-------|-------|-------|--------|-------|-------|--------|--------|-------|-------|--------|--------|--------|
| Compressor Performance | | | | | | | | | | | | | |
| Full Load Pressure (psig) | 100 | 100 | 125 | 150 | 100 | 125 | 150 | 175 | 100 | 125 | 150 | 175 | 200 |
| Capacity (acfm) | 1105 | 1335 | 1240 | 1100 | 1640 | 1440 | 1330 | 1240 | 1875 | 1733 | 1575 | 1440 | 1330 |
| Motor (hp) | 200 | 250 | 250 | 250 | 300 | 300 | 300 | 300 | 350 | 350 | 350 | 350 | 350 |
| Dimensions and Weights | | | | | | | | | | | | | |
| Length (in) | 154 | 154 | 154 | 154 | 154 | 154 | 154 | 154 | 154 | 154 | 154 | 154 | 154 |
| Width (in) | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 78 |
| Height (in) | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| Weight (lb) | 12480 | 12720 | 12720 | 12720 | 13270 | 13270 | 13270 | 13270 | 13620 | 13620 | 13620 | 13620 | 13620 |

* "HH", "XH" and "ZH" Models not available with 24KT.

| TS-32S, 60Hz | 400L | 400H | 400HH* | 450L | 450H | 450HH* | 500L | 500H | 500HH* | 600L | 600H | 600HH* |
|-------------------------------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|
| Compressor Performance | | | | | | | | | | | | |
| Full Load Pressure (psig) | 100 | 125 | 150 | 100 | 125 | 150 | 100 | 125 | 150 | 100 | 125 | 150 |
| Capacity (acfm) | 200 | 1943 | 1682 | 2350 | 2135 | 1943 | 2530 | 2350 | 2200 | 3000 | 2700 | 253 |
| Motor (hp) | 400 | 400 | 400 | 450 | 450 | 450 | 500 | 500 | 500 | 600 | 600 | 600 |
| Dimensions and Weights | | | | | | | | | | | | |
| Length (in) | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 |
| Width (in) | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 |
| Height (in) | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 |
| Weight (lb) | 15900 | 15900 | 15900 | 15900 | 15900 | 15900 | 16400 | 16400 | 16400 | 16400 | 16400 | 16400 |

* "HH" Models not available with 24KT.

YOU CAN FURTHER MAXIMIZE YOUR AIR QUALITY WITH THE SULLAIR SYSTEM

This compressor is one of several compressed air products that comprise the Sullair System. The System includes oil-free and lubricated compressors, compressed air dryers, filters and other related contaminant-

removal accessories working together to deliver superior performance and energy efficiency.



Moisture Removal
To 35°F-50°F° dewpoint, -40°F optional.



Particulate Removal
Provides the highest standard ISO 8573.1 quality compressed air.



Oil/Water Separation
For safe disposal of compressor fluids.



Condensation Removal
Of liquids with zero air loss.

For information on Sullair products and services, please contact your local Sullair distributor.



www.sullair.com

SULLAIR CORPORATION, 3700 East Michigan Boulevard, Michigan City, IN 46360 Telephone: 1-800-367-6737 or 1-219-879-5451