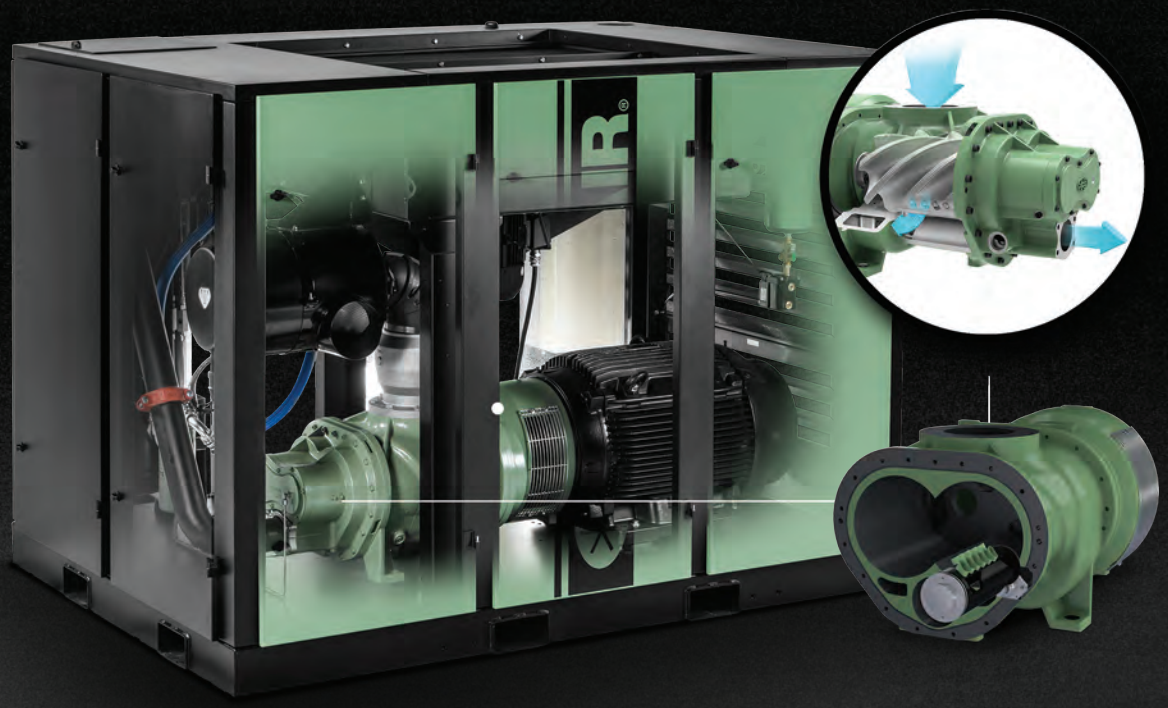
SULLAIR®

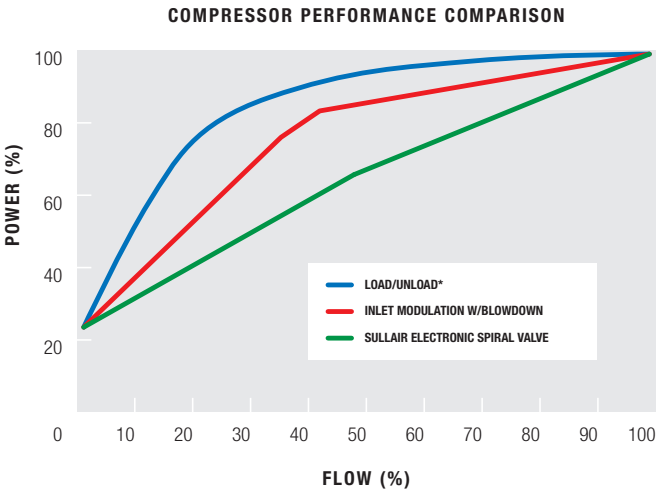
ELECTRONIC SPIRAL VALVE

Precision Compressor Control to Reduce Operational Costs



MATCHING AIR SUPPLY TO DEMAND SAVES YOU MONEY

When fully loaded all compressors tend to work equally well. But what happens when demand changes — and compressors move to part load?



Comparison powered by AirSuite

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

Sullair Electronic Spiral Valve Technology is a variable capacity control method to efficiently manage changes in compressor demand — reducing the amount of air compressed which in turn reduces energy usage saving you money.

Plus, Electronic Spiral Valve Technology helps improve compressor durability and increase air end life by reducing the bearing loads due to variable flow demands.

And a tight +/- 1 PSI pressure band means Sullair Electronic Spiral Valve Technology provides greater precision when compared to other variable capacity control methods.

ELECTRONIC SPIRAL VALVE TECHNOLOGY — EFFICIENT VARIABLE CAPACITY CONTROL

Specifically-engineered variable capacity Sullair air ends include bypass ports in the compression chamber.

The spiral valve is gear-driven — with a stepper motor smoothly and precisely rotating the spiral valve with no pneumatic losses like other geometry control or variable displacement methods.

The precision balanced spiral valve rotates — opening ports under part load conditions — which reduces the size of the compression chamber.

The 10˝ Color Sullair Touch Screen Controller guides the actions of the Electronic Spiral Valve. Software enables multiple Sullair compressors with Electronic Spiral Valve Technology to operate together seamlessly.

HOW IT WORKS

The compression volume varies to suit the air demand by progressively opening or closing internal bypass ports on the air end. Capacity is matched to system demand, reducing cycling time and extending component life. Part-load capacity and efficiency can produce **ENERGY SAVINGS UP TO 30%** (compared to load/no load).

Rotors removed to show bypass ports

ELECTRONIC SPIRAL VALVE SAVES YOU POWER

The compressor displacement is matched to the output need. Sullair Electronic Spiral Valve Technology assures precision operation for virtually any part load point. It provides significant power savings at part load conditions when compared to compressors using suction throttling or load/no load control. Plus, as the compressor loads there is less inrush current — reducing energy usage spikes.

INCREASES CAPACITY CONTROL EFFICIENCY

By activating automatically when the unit is operating under partial load, and allowing the compression of only the required quantity of air, the spiral valve increases the efficiency of the compression process. The ultimate result? Greater compression efficiency and reduced power consumption **— UP TO 55% TURN DOWN.**

And the Sullair Touch Screen Controller enables multiple Electronic Spiral Valve-equipped compressors to work in harmony — load-sharing while reacting seamlessly to changes in air demand while eliminating deadband between multiple compressors.

FULLY LOADED

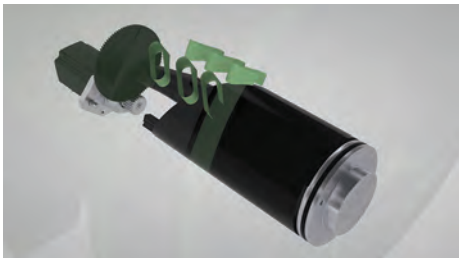
The spiral valve is turned to keep all bypass ports closed — utilizing the full compression chamber of the air end.

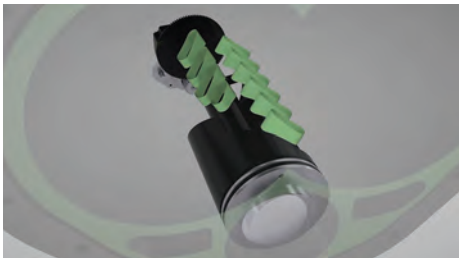
PART LOAD

As air demand is reduced, the spiral valve turns – opening some bypass ports – reducing the length of the compression chamber. Less air fully compressed = energy savings

TURNDOWN

When the spiral valve has turned opening all bypass ports, up to 55% turndown is achieved.





SULLAIR ELECTRONIC SPIRAL VALVE

THE EFFICIENT CHOICE IN ALL CONDITIONS

CATEGORY	ELECTRONIC SPIRAL VALVE ADVANTAGE
Initial Investment	Up to 20% lower up-front cost compared to a unit with variable speed drive.
Energy Savings	Significant energy savings when compared to load/no load and modulation options — up to 30%.
Harsh Environments	Allows use of Wye-Delta starter which is more robust in harsh environments compared to VSD. Additionally, requires no special cooling to operate effectively.
Altitude	Not affected by high altitudes.
Fluctuating Power	Not impacted by dirty power and voltage fluctuations.
Reliability	Sullair has more than 30 years expertise in spiral valve technology — now more precise with electronic controls.
Durability	Constant pressure reduces bearing loads — helping extend air end life.
Install Location	NEMA 4 design allows installation indoors or outdoors.

SULLAIR ELECTRONIC SPIRAL VALVE TECHNOLOGY AVAILABLE IN:

Scan to see the Electronic Spiral Valve in action with the LS Series

Traditional Sullair Spiral Valve capacity control available in other Sullair models. Ask your authorized Sullair distributor for more information.

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