



L45SR - L75SR - L120SR  
Speed Regulated Rotary Screw Compressors



Engineered to Save

# Speed Regulated Rotary Screw Compressors

Reliable compressed air provided at maximum efficiency under all operating conditions with quick, economical servicing as standard.

The CompAir LSR Series of rotary screw air compressors incorporates a variable speed switched reluctance drive system of outstanding efficiency, offering the ability to precisely match power consumption with air demand.

## Maximum efficiency at any level of demand cuts energy costs and saves money

The ability to precisely match output to demand allows the compressors to consume exactly the right amount of energy to do the job, and no more. This is achieved by varying the speed of the drive motor with a level of efficiency which cannot be matched by any other conventional variable speed drive system.

In addition, precise pressure control and smooth acceleration and deceleration of rotary components extends service life improving payback on your investment.

## Proven and dependable switched reluctance drive systems in a new application concept

CompAir's switched reluctance drive systems offer the most significant technological advance in rotary drives since the inception of the induction motor over a century ago and, combined with the latest features for control and monitoring, overcome many of the commonly accepted disadvantages of induction motors, still used in many applications today.



LSR Series compressors are able to accurately maintain a set pressure while responding instantly to changes in air demand. Maintaining air system pressure at an exact pre-set level eliminates the need to operate within pressure bands, enhancing efficiency still further. The quality of your process or product can also be improved with the guarantee of constant, unchanging air system pressure.

## Saves Energy Costs

Regulates compressor speed to match output to system demand.  
Eliminates run-on time during periods of low system demand.  
Eliminates over pressurization.

## Improves Process or Product Quality

Constant pressure air supply.

## Unique Switched Reluctance Drive System

Higher efficiency than alternative variable speed drives.  
Simple motor and controller design.  
Established, proven and reliable.

## Reduces Electrical and Mechanical Loads

Soft starting with no current peaks.

## Economical to Maintain

Grouped service components reduce down time and simplify servicing.



The LSR Series of compressors are designed to operate effectively as stand alone units or in conjunction with other compressor packages to provide maximum air efficiency at all times

## Easy to Install and Operate

Low noise level, free standing and simple operator controls.



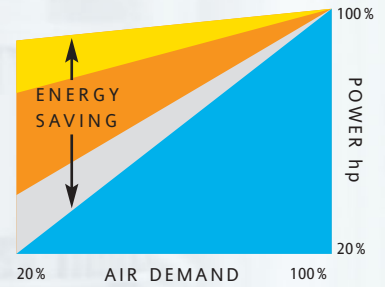
## Remarkable energy savings

Air compressors are designed to be capable of performing continuously at maximum output capacity and the CompAir LSR Series is no exception.

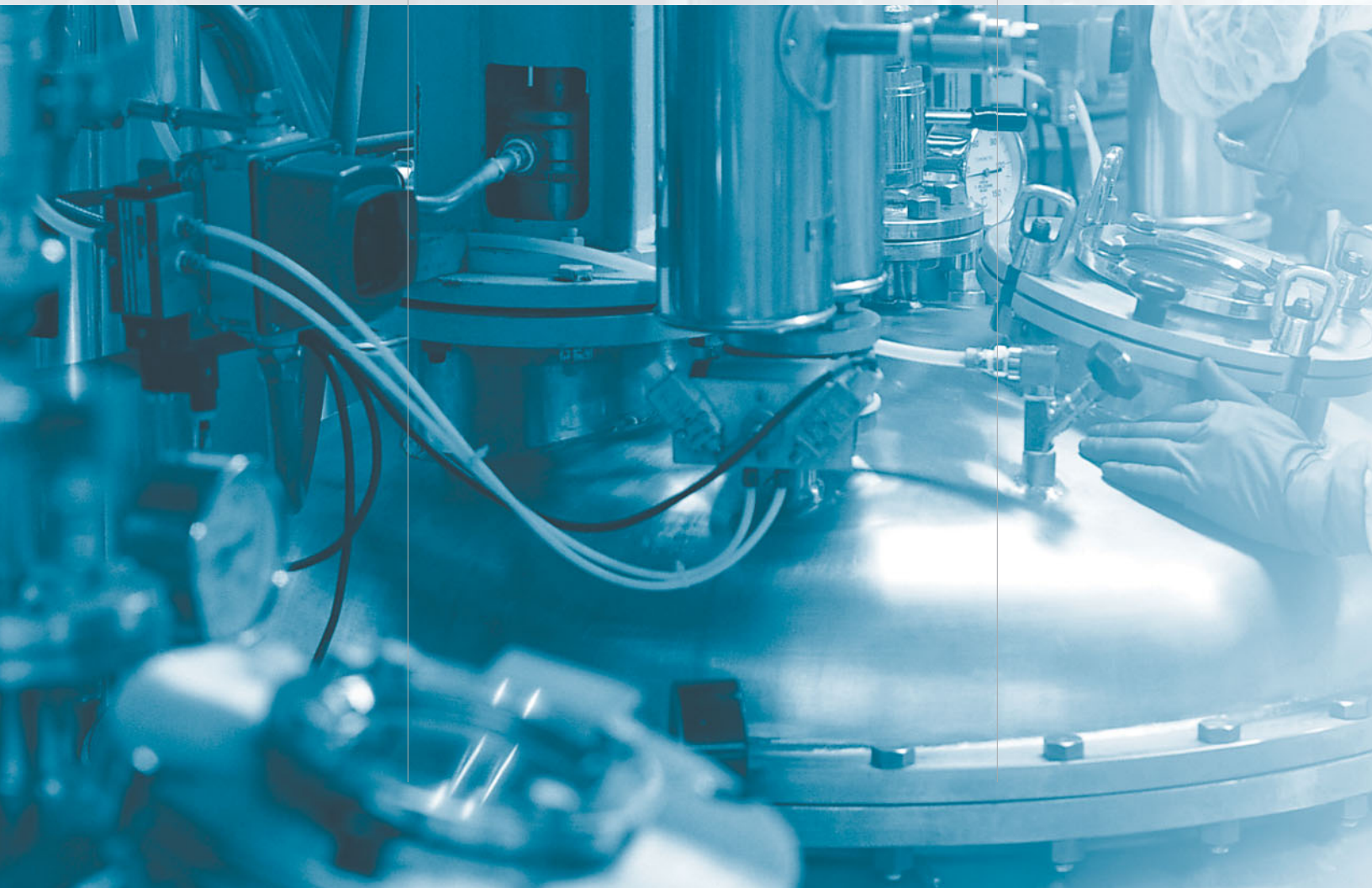
Surveys show, however, that maximum capacity is only required at limited, peak times with a majority of air compressors operating at an average 50% - 70% of full capacity. Below maximum capacity is where the true energy saving potential of the LSR Series can be realized.

With energy consumption in near perfect proportion to demand, the energy wasted with conventional regulation systems can be saved. Combine this energy saving concept with the CompAir designed, developed and manufactured compression element, giving high air output for minimum power consumption, and you have a formidable duo with significant energy saving potential.

## Power Consumption Comparison



- Conventional Compressors with Modulating Control
- Conventional Load/Unload Regulation Compressors
- Variable Speed Frequency Inverter Compressors
- CompAir LSR Series Compressors

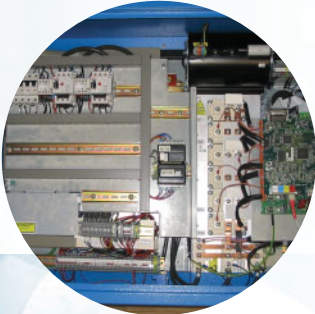


## Enhanced reliability

The CompAir Switched Reluctance drive systems are inherently soft starting, with smooth and controlled acceleration and deceleration, reducing stress on mechanical and electrical components. Compared to conventional variable speed drives, the electronically controlled regulation of the LSR Series simplifies system construction resulting in a 'less to go wrong' enhanced reliability concept.

## Quality you can rely on

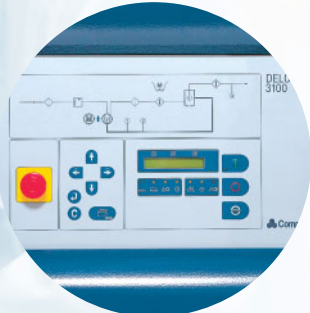
An ISO9001 certified design and manufacturing process, continuously audited by our internal auditors ensures a high quality and reliable product.



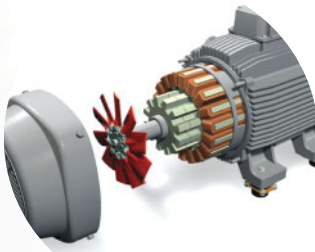
*Grouped service components and easy access keeps service downtime and costs to a minimum.*



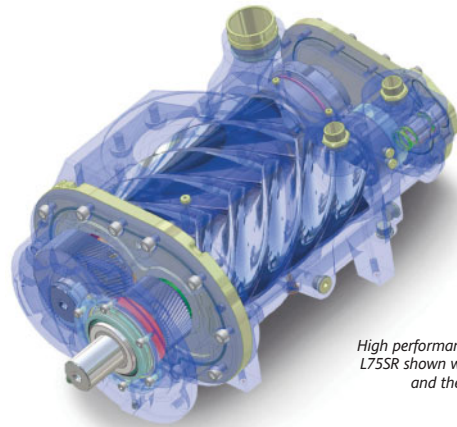
*Drive efficiency losses are eliminated by direct coupling of the motor and compression element.*



*Easy operator interface and status monitoring via the microprocessor based control system.*



*SR motor assembly utilizing standard IP55 housings. (L75SR shown)*



*High performance compressed air element L75SR shown with integrated oil filtration and thermal mixing valve.*

The LSR Series compressor drives use tried and tested Switched Reluctance Drive Technology in a new application concept

## Easy to install

The compressor's small installation footprint, lifting slots and vertical air discharge simplify installation.

## Easy starting

All conventional motor drive systems require a high starting peak current. The LSR Series compressor drive system, however, is able to start without any increase in power supply current above normal running levels, reducing stress on the site power supply system and eliminating peak current energy cost penalties.

## Easy to operate

The compressor controller continuously protects your investment by monitoring every vital operational parameter. Once installed and commissioned, just tell any of the LSR Series compressors what pressure you require and press the start button.



### Easy to maintain

The compressor is designed to help reduce maintenance costs. It will provide you with advance indication of service requirements allowing you to schedule maintenance at convenient times.

Servicing is simple, quick and economical. All routine maintenance parts are conveniently grouped behind the hinged and removable service door, providing instant access and reducing service times.

LSR Series compressors represent CompAir's commitment to providing innovative and high technology solutions for complete compressed air systems



L45SR

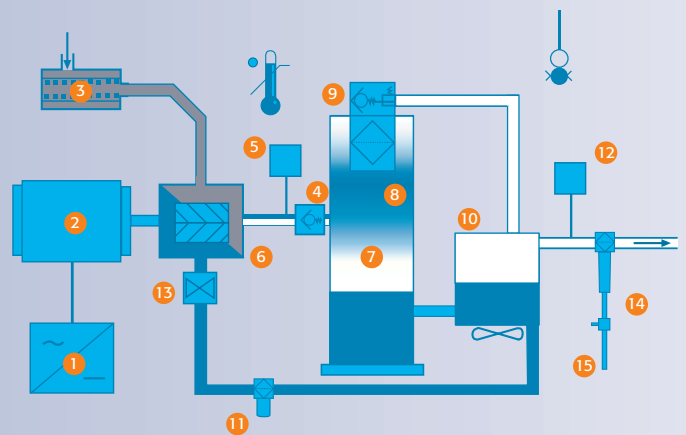


L75SR



L120SR





Typical Air/Oil Flow Diagram



## Technical Specifications

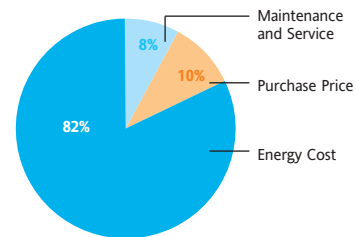
Model	Drive Motor HP	Max Working psi	Free Air Delivered Minimum-Maximum cfm	Dimensions (ins.)			Noise Level** db(A)	Weight lbs.
				L	W	H		
L45SR	67	75	53-283	67.8	36.2	65.3	71 (at 70% Load)	2,282
		100	52-280					
		125	51-265					
		145	49-248					
		175	48-227					
		190	47-217					
L75SR	100	72	81-494	85	48.2	77.6	73 (at 70% Load)	4,075
		100	80-481					
		130	79-446					
		145	78-428					
		175	77-396					
		190	77-377					
L120SR	160	72	94-700	94.5	55.1	72.8	76	5,060
		100	92-692					
		125	89-658					
		150	91-611					
		175	104-570					
		189	118-543					

### Key to diagrams

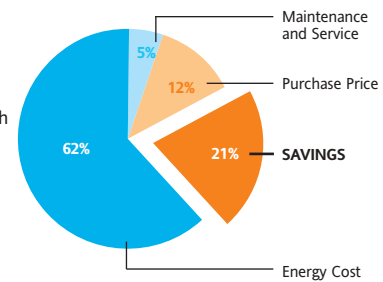
- |  |                                     |
|--|-------------------------------------|
| 1 Switched Reluctance Motor Controller | 9 Minimum Pressure Non Return Valve |
| 2 Switched Reluctance Motor            | 10 Oil Cooler                       |
| 3 Air Intake Filter                    | 11 Air Cooler                       |
| 4 Non Return Valve                     | 12 Oil Filters                      |
| 5 Temperature Sensor                   | 13 Pressure Sensor                  |
- 
- |                             |  |
|-----------------------------|--|
| 6 Air Compression Element   |  Compressed Air     |
| 7 Reclaimer Vessel          |  Oil                |
| 8 Air/Oil Separator Element |  Air                |
|                             |  Compressed Air/Oil |

### Annual Cost of Ownership

A typical oil lubricated rotary screw air compressor operating at 70% load.



A typical comparison of an LSR Series compressor with a conventional air compressor.



# Intelligent Air Technology

Compressed air solutions for every application

## Compressors

Up to 2750 cfm

1 - 604 hp

Up to 6000 psi

## Lubricated

Rotary Vane

Single Stage Screw

Speed Regulated Screw

Piston

Portable

## Oil-Free

Two Stage Screw

Water-Sealed Screw

Piston

Portable

## Complete Accessories Program

Filters and Dryers

Cooling Systems

Heat Recovery

Condensate Management

Air Receivers

Multi-Set Controllers

Lubricants

## Value Added Services

Air Audit

Performance Reporting

Utility Air

Performance Contracting

## Complete Service for Compressed Air Technology

Engineering of Complete Compressor Stations

Local Service Centers

Guaranteed Parts Availability



CompAir USA  
130 Fox Drive  
Piqua, Ohio 45356  
United States of America

Telephone (937) 778-2500  
Fax (937) 778-4123

www.CompAirUSA.com  
Email: sales@compairusa.com

CompAir Canada  
871 Cranberry Court  
Oakville, Ontario L6L 6J7  
Canada

Telephone (905) 847-0688  
Facsimile (905) 847-8124

www.CompAir.ca  
Email: info@compair.ca

CompAir policy is one of continuous improvement and we therefore reserve the right to alter specifications and prices without prior notice. All products are sold subject to the Company's conditions of sale.

Brochure re-order ref: 98700-355NA  
Reprint 1/2007

Member of:



CompAir is an ISO 9001 registered company