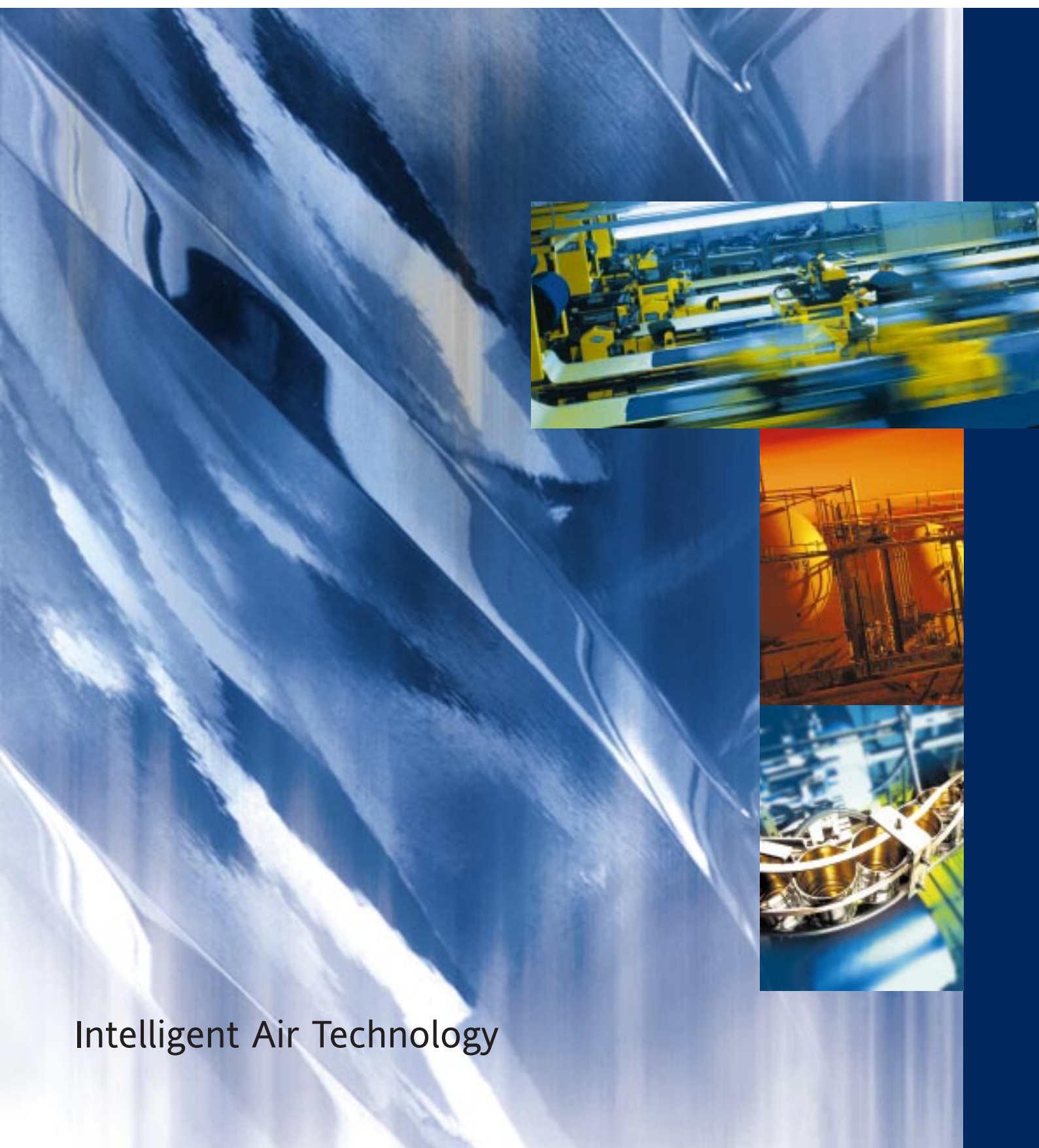




L45SR L75SR

Speed Regulated Rotary Screw Compressors



Intelligent Air Technology



# 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.

## Tried and tested 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 pressurisation.

## 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.



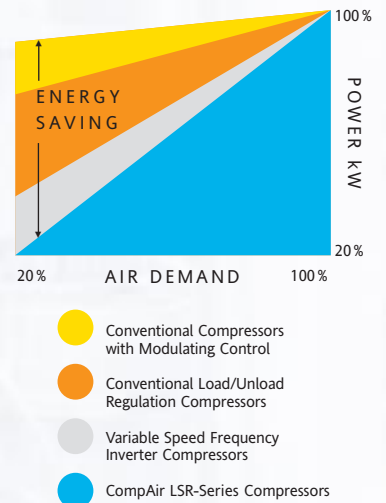
## Remarkable energy savings

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 realised.

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



## 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 and Lloyd's Register ensures a high quality and reliable product.



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

## Easy to install

The compressors 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 systems, however, are 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.

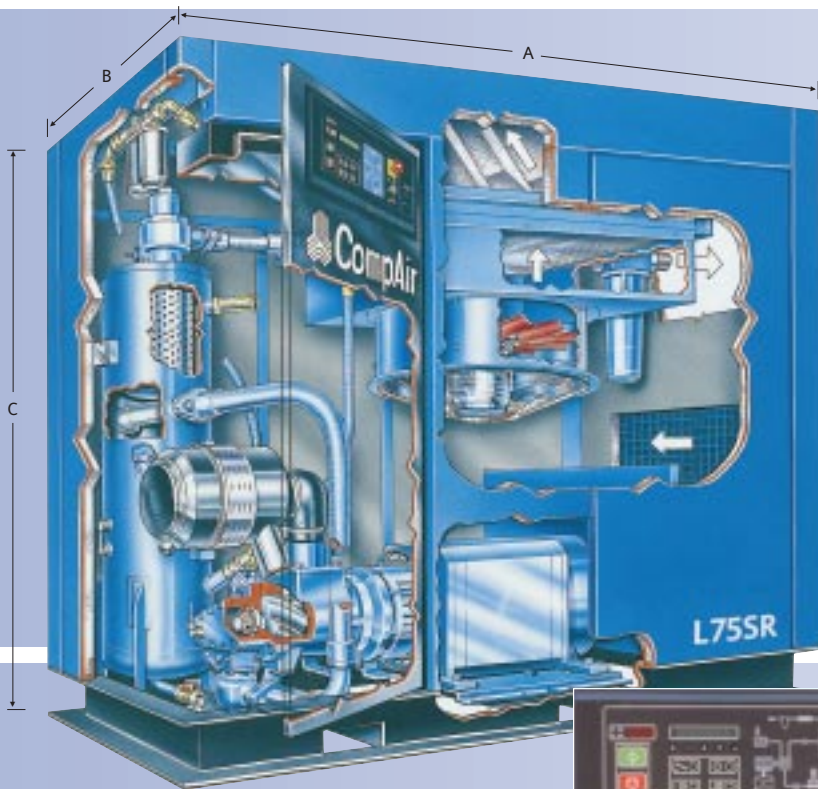


### Easy to maintain

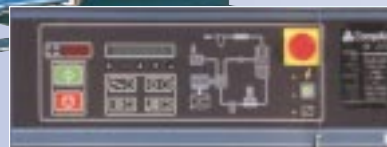
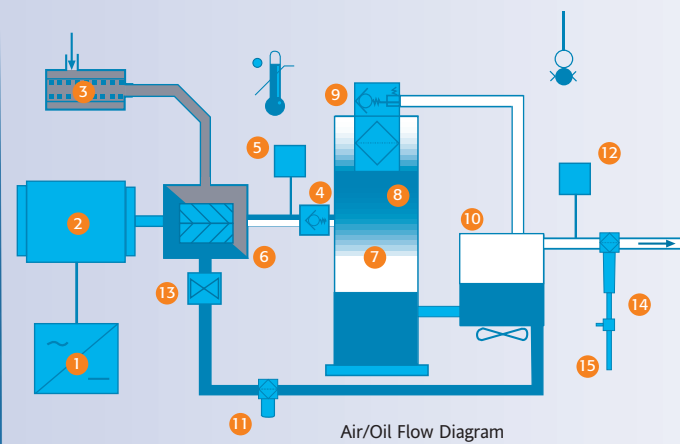
The compressor is designed to help reduce maintenance costs. It will provide you with advance indication of service requirements allowing you to schedule maintenance at convenient times.

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.

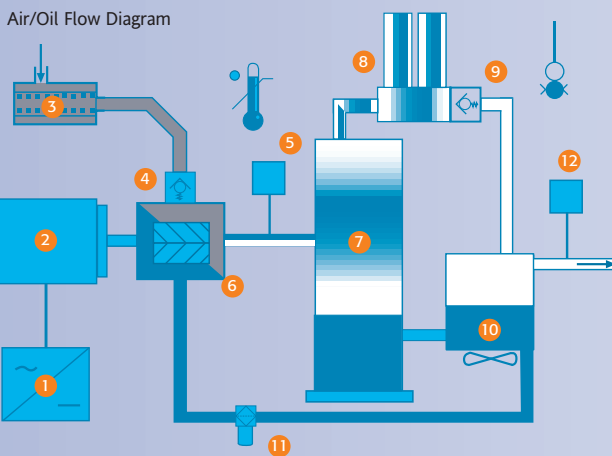
LSR-Series compressors represent CompAir's commitment to providing innovative and high technology solutions for complete compressed air systems



### L75SR



Compressor Control Panel



### L45SR







# Technical Specifications

|  | L45SR  | L75SR                             |
|--|--|-----------------------------------|
| Supply                                 | 50Hz/60Hz - 3 Phase + Earth  |                                   |
| Motor                                  |  |                                   |
| Motor Type                             | High efficiency variable speed switched reluctance, through ventilated sealed system |                                   |
| Maximum Output                         | 50kW (67 hp)   | 75kW (100 hp)                     |
| Motor Classification                   | Class F with Class H insulation system   |                                   |
| Compressor                             |  |                                   |
| Compressor Type                        | High efficiency variable speed rotary screw  |                                   |
| Drive Method                           | Direct   |                                   |
| Cooling                                | Air cooled, vertical air discharge   |                                   |
| Ambient Temperature                    | 0°C - 45°C   | 0°C - 43°C                        |
| Max. Working Pressure                  | 13 bar g   | 13 bar g                          |
| Min. Working Pressure                  | 5 bar g  | 5 bar g                           |
| Max. Free Air Delivery (FAD) @ 7 bar g | 7.93m <sup>3</sup> /min (280cfm)   | 12.23m <sup>3</sup> /min (431cfm) |
| Dimensions                             | 0.99m (A) x 1.42m (B) x 1.70m (C)  | 2.05m(A) x 1.20m (B) x 1.70m (C)  |
| Dry Weight                             | 939kg  | 1200kg                            |
| Air Outlet Connection                  | G1½  | R2½                               |
| Noise Level                            | 77dB(A)* at full load  |                                   |

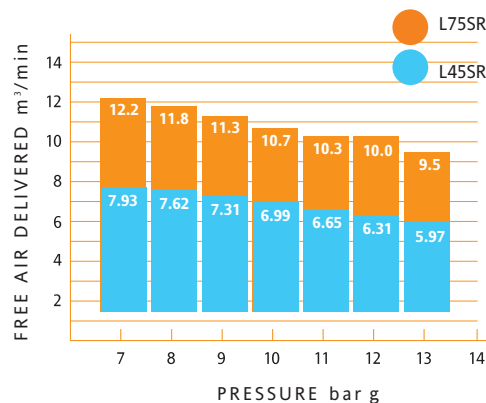
\* +/- 3dB(A) according to PNEUROP/CAGI test code

## Key to diagrams

- 1 SR Motor Drive
- 2 SR Motor
- 3 Air Intake Filter
- 4 Non Return Valve
- 5 Temperature Sensor
- 6 Air Compression Element
- 7 Reclaimer Vessel
- 8 Air/Oil Separator Element
- 9 Minimum Pressure Non Return Valve
- 10 Air/Oil Cooler
- 11 Oil Filters
- 12 Pressure Sensor
- 13 Oil Stop Valve
- 14 Condensate Separator
- 15 Condensate Drain Valve

-  Compressed Air
-  Oil
-  Air
-  Compressed Air/Oil

## Performance

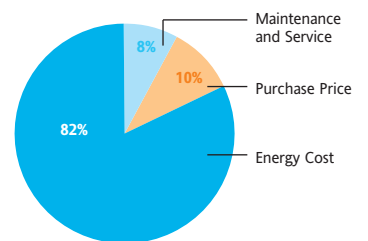


Free air delivered (FAD) performance figures are stated in accordance with the PNEUROP/CAGI PN2CPTC2 industry test codes. These codes provide for equal comparison of different manufacturers' performance figures.

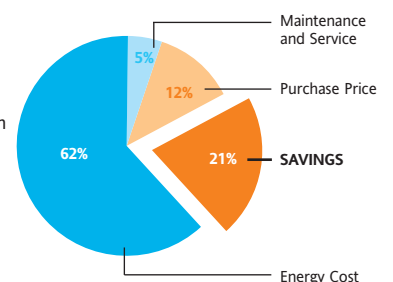
Reference conditions: absolute inlet pressure 1 bar a (14.5 psi) - intake air temperature 20°C (68°F).

## 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

0.1 - 43m<sup>3</sup>/min  
0.75 - 260kW

### Lubricated

Rotary Vane

Single Stage Screw

Speed Regulated Screw

Piston

Portable

### Oil-Free

Two Stage Screw

Water-Sealed Screw

Piston

Portable

Turbo

## Complete Accessories Programme

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 Centres

Guaranteed Parts Availability



www.CompAir.com  
Email sales@compair.com



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8/2000



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