

SENATOR

INDUSTRIAL AIR COMPRESSORS

www.senatorair.com.au

 **environ**



ESV Series 7.5 to 15 kW

Rotary Screw Air Compressors

1.20 to 2.62 m³/min

7 to 10 bar

The **Senator ESV Series** comprises a range of electric rotary screw air compressor sets that are integrated, tank-mounted packages supplied ready for use. They incorporate state-of-the-art variable speed drive (VSD) technology that saves energy by continuously adjusting the compressor output to match air demand.

Each model has been developed using innovative European design concepts to achieve a compact layout and upgraded with heavy-duty components to satisfy the demands of Australia's harsh operating conditions.

Ideally suited for small-to-medium industrial applications with fluctuating compressed air demand, the fully-featured Senator ESV Series establishes a new affordability benchmark for high efficiency VSD screw compressors without sacrificing performance, quality and reliability.

→ Energy Saving

Energy consumption comprises about 75% of the total annual cost associated with an electric screw compressor in most industrial applications. A conventional fixed-speed 15 kW unit, for example, uses around \$7,000 worth of electricity per year on average working just one 38-hour shift per week.

Senator ESV Series compressors typically use 15 to 30% less electricity than comparable fixed-speed models. In the above example for a 15 kW unit, this would add up to a cost saving of approximately \$2,000 per year.

A Senator ESV Series compressor is the smart choice whether you're buying for a new installation or a replacement upgrade. It will pay for itself many times over in electricity cost savings.

→ Features and Benefits

Compact turn-key compressor package offers a simple plug-and-play solution with minimum installation cost and space requirements.

Soundproofed cabinet with anti-vibration mounting of rotating components enables the unit to be installed directly within the working environment.

Precision technology rotary screw air-end with advanced rotor profile and slow rotor speed ensures 24/7 reliability, high airflow output, low energy consumption and long service life.

Microprocessor-based variable speed drive (VSD) with field-oriented vector control provides optimized motor speed and torque performance under all operating conditions.

High efficiency, VSD-duty electric motor has a superior temperature rise capability allowing it to operate continuously across the full speed range.

7, 8 and 10 bar (102, 116 and 145 psi) outlet pressure capability that is suitable for a broad range of compressed air applications.

Fan-forced after-cooling minimizes water carry-over in the discharge air and increases the efficiency of any downstream air treatment equipment such as dryers and filters.

Thermostat-controlled oil cooling permits continuous operation in ambient temperatures of up to 45°C without shortening oil life or increasing oil vapour carry-over.

VSD dynamic motor control operates smoothly to prevent electrical current spikes and mechanical shock loading during compressor start-up.

Multi-function electronic controller with LED display serves as a user-friendly interface for compressor operation, system monitoring and protection, and maintenance scheduling.

Oversized twin receiver tanks provide ample air storage capacity to prevent excessive system pressure fluctuations and facilitate more effective condensate removal.

Lift-off cabinet panels are easily removable for maintenance access. **Spin-on oil filter and air/oil separator elements** minimize service downtime.

User configurable into separate compressor and air tank modules for special purpose applications or restricted installation spaces.

Compliant with Australian Workplace Health and Safety Regulations for industrial workplace use.

→ Customer and Product Support

100-point pre-delivery inspection and full-load testing carried out in Australia before each compressor is dispatched to its owner.

Australia-wide dealer network offering sales, installation, service and genuine spare parts backup.

12-month parts and labour factory-backed warranty.

→ Accessories

A full range of matching refrigerant dryers, in-line filters and other compressed air system components is available for the Senator ESV Series compressors. Please consult your local Senator dealer for application specific advice.



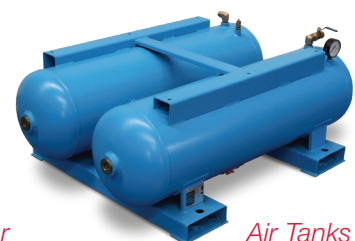
→ User Configured Option



Unitary Tank-Mounted Configuration (as supplied)



Compressor



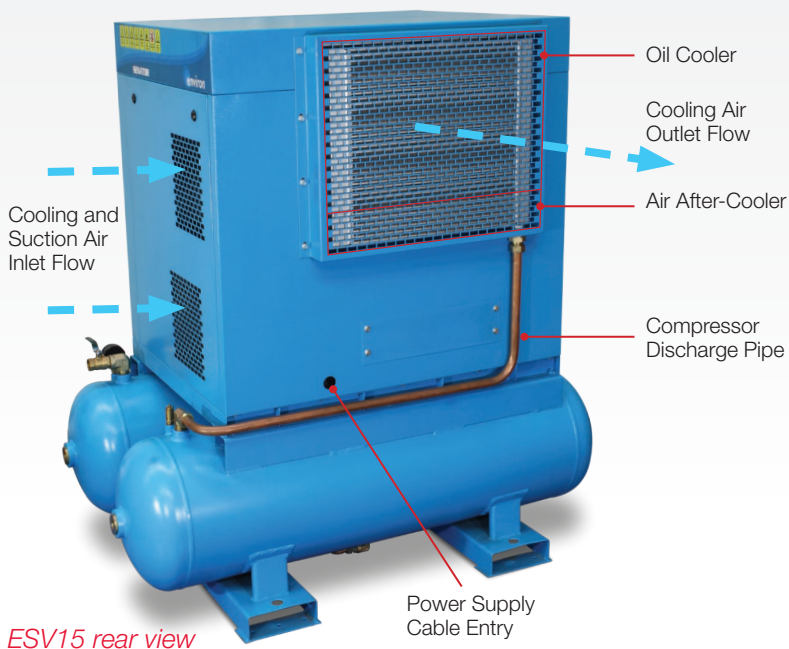
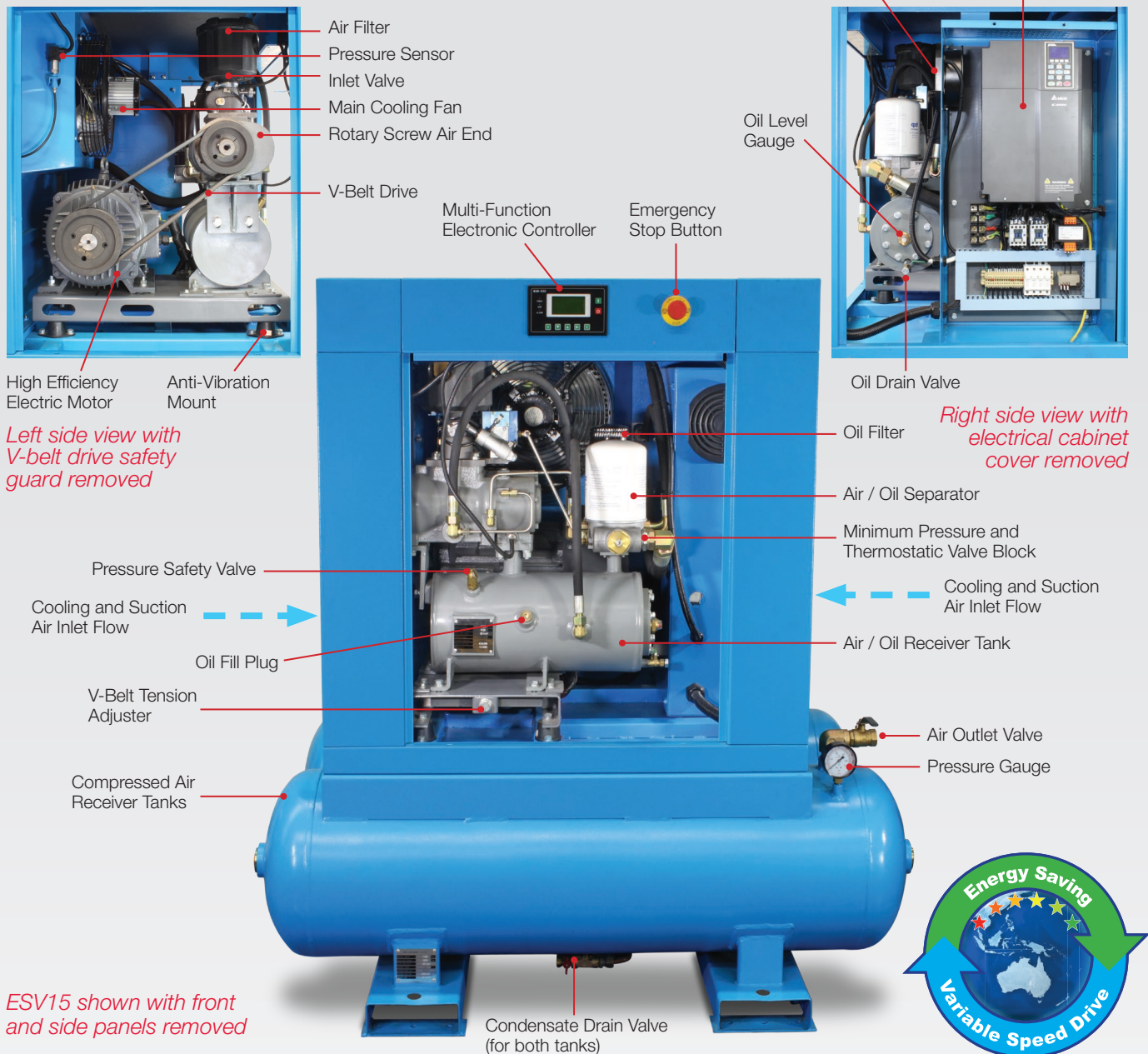
Air Tanks

Two-Piece Configuration ^Δ*

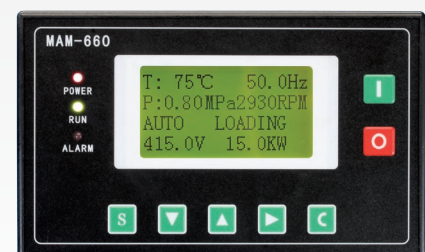
^Δ Compressor shown with accessory bolt-on mounting feet (Product Code SE ESBMK).

* Compressor and air tanks not available for purchase separately.

Equipment Design Details



Multi-Function Electronic Controller



The electronic controller automatically monitors and controls the compressor's air, oil and electrical systems. It also tracks scheduled maintenance tasks for key components.

Sophisticated, yet with an intuitive and easy-to-use interface, the controller offers a full range of functions to optimize the compressor's efficiency, performance and reliability.

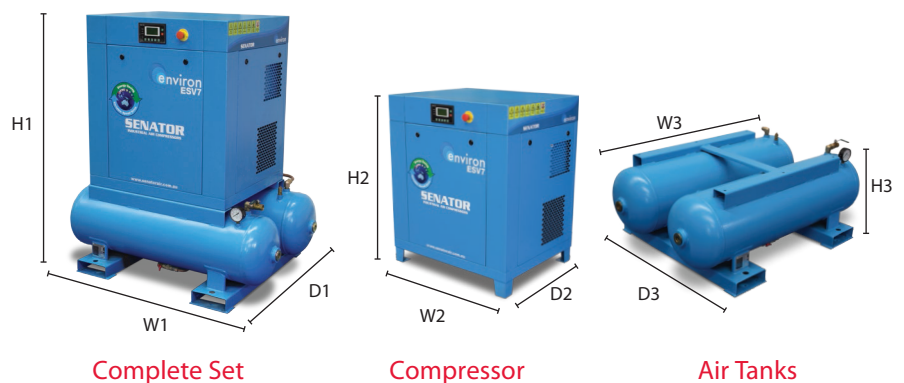
Specifications

| Parameter | | Unit | Model | | |
|-----------------------------|--------------------------|---------------------|-------------|-------------|-------------|
| | | | ESV7 | ESV11 | ESV15 |
| Free Air Delivery | @ 7 bar ¹ | m ³ /min | 0.48 - 1.20 | 0.75 - 1.88 | 1.05 - 2.62 |
| | @ 102 psi ¹ | cfm | 17 - 42 | 26 - 66 | 37 - 93 |
| | @ 8 bar ^{1,2} | m ³ /min | 0.44 - 1.10 | 0.71 - 1.78 | 0.98 - 2.45 |
| | @ 116 psi ^{1,2} | cfm | 16 - 39 | 25 - 63 | 35 - 87 |
| | @ 10 bar ¹ | m ³ /min | 0.40 - 0.99 | 0.63 - 1.57 | 0.87 - 2.17 |
| | @ 145 psi ¹ | cfm | 14 - 35 | 22 - 55 | 31 - 77 |
| Motor ³ | Power | kW | 7.5 | 11 | 15 |
| | | hp | 10 | 15 | 20 |
| Tank | Volume | Litre | 250 | 350 | 350 |
| Noise Level | @ 1 m | dB(A) | 69 | 71 | 73 |
| Air Outlet | Size | BSP | 3/4" F | 1" F | 1" F |
| Dimensions - Complete Set | W1 | cm | 133 | 151 | 151 |
| | D1 | cm | 94 | 103 | 103 |
| | H1 | cm | 143 | 155 | 155 |
| Dimensions - Air Compressor | W2 | cm | 86 | 105 | 105 |
| | D2 | cm | 81 | 91 | 91 |
| | H2 | cm | 104 | 112 | 112 |
| Dimensions - Air Tanks | W3 | cm | 133 | 151 | 151 |
| | D3 | cm | 94 | 103 | 103 |
| | H3 | cm | 48 | 52 | 52 |
| Weight | Complete Set | kg | 420 | 563 | 598 |
| | Compressor | kg | 279 | 386 | 421 |
| | Air Tanks | kg | 143 | 179 | 179 |

¹ Per ISO 1217:2009 Annex E.

² 8 bar (116 psi) configuration is standard.

³ Electricity supply: 415 V, 3-Ph, 50 Hz.



AUTHORIZED SENATOR DEALER:

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Airmatics
The Compressed Air Specialists since 1987

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Specifications are subject to change without notice. 2015-01