

SENATOR

INDUSTRIAL AIR COMPRESSORS

www.senatorair.com.au

 environ



DSV Series 7.5 to 90 kW

Rotary Screw Air Compressors

1.02 to 15.20 m³/min

8 to 13 bar

Eligible for Government Energy Efficiency Grants



The new **Senator DSV Series** offers a range of energy efficient, base-mounted air compressor sets that are the smart choice for most industrial applications. Their variable speed capability saves energy by adjusting compressor output to match fluctuating air demand.

The designs have been extensively proven throughout Asia and Europe with thousands of units already in service. Further refinement of the DSV Series has taken into account the extensive feedback from Senator end users in Australia over many years.

All models are exclusively equipped with German-engineered air ends to achieve the highest technological and quality standards. They are further price complemented by a full suite of heavy-duty components that altogether provide you with an unbeatable price-performance choice.

➔ Energy Saving



Senator DSV Series compressors are fitted with a variable speed drive (VSD) that provides optimized performance under all operating conditions.

Energy consumption comprises about 75% of the total cost of ownership for an electric screw compressor in most workplaces.

Senator variable speed compressors typically use 15 to 30% less electricity than comparable fixed speed models.

The total cost of ownership and CO₂ emissions are both lower due to the reduced electricity consumption.

The electricity cost savings will typically recoup the capital cost of the compressor and then some.

Electrical phase reversal correction and abnormal current and voltage protection are also provided by the VSD for main drive motor operation.

➔ EU COMP Rotary Screw Air End



Oil lubricated, precision engineered and ultra reliable EU COMP air ends are a standout feature of the Senator DSV Series.

Compact V-belt drive or efficient direct gear drive design performance matched to each compressor model.

State-of-the-art third generation rotor profile with 5:6 lobe combination delivers more air with lower energy consumption.

Modern design with fewer components is easier to manufacture with smaller tolerances for smoother and more efficient running.

One-piece rotor enclosure casting, Viton O-rings and a unique shaft seal combine to provide leak free operation.

Advanced bearing arrangement ensures robust and long-lasting reliability with an ISO L10 rating life of more than 100,000 hours.

➔ AIMS Controller



Air Intelligent Management System (AIMS) controller serves as a user-friendly interface for compressor operation, monitoring, protection and maintenance scheduling.

- Fully automatic operation after initial push-button start.
- Continuous display of operating status, pressure and temperature.
- Over pressure and under / over temperature protection.
- Warning and shutdown alarm notification and log.
- Scheduling and tracking of critical maintenance tasks.
- Selectable automatic restart after mains power failure.
- Selectable run time limit for maintenance enforcement.
- Remote hardwired stop / start control.

➔ Other Features and Benefits

8, 10 & 13 bar outlet pressure capability that satisfies the requirements of most industrial compressed air applications. 16 bar models available upon request.

Cost-effective V-belt drive transmission facilitates a compact design and easy speed ratio changes for different pressures (models DSV8 to DSV45).

Ultra reliable direct-drive transmission is virtually maintenance-free and runs precisely with negligible energy loss (models DSV55 to DSV90).

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

Premium efficiency IE3 class, MEPS compliant electric drive motor reduces energy consumption. Heavy-duty Class F insulation and IP55 protection.

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

Inlet air filter with integrated cyclonic pre-separation characterised by high dust capacity and low pressure drop for long service life.

Unique inlet valve design has fewer wearing parts and operates with low pressure loss and reduced noise.

Oversized air-oil receiver tank designed for optimal air / oil separation and increased lubricating oil capacity.

Internal cartridge air-oil separator element ensures the lowest residual oil content in the discharge air.

Fan-forced after-cooling of the discharge flow increases the efficiency of downstream compressed air treatment.

Thermostat-controlled, fan-forced oil cooling permits continuous operation in ambient temperatures of up to 45°C.

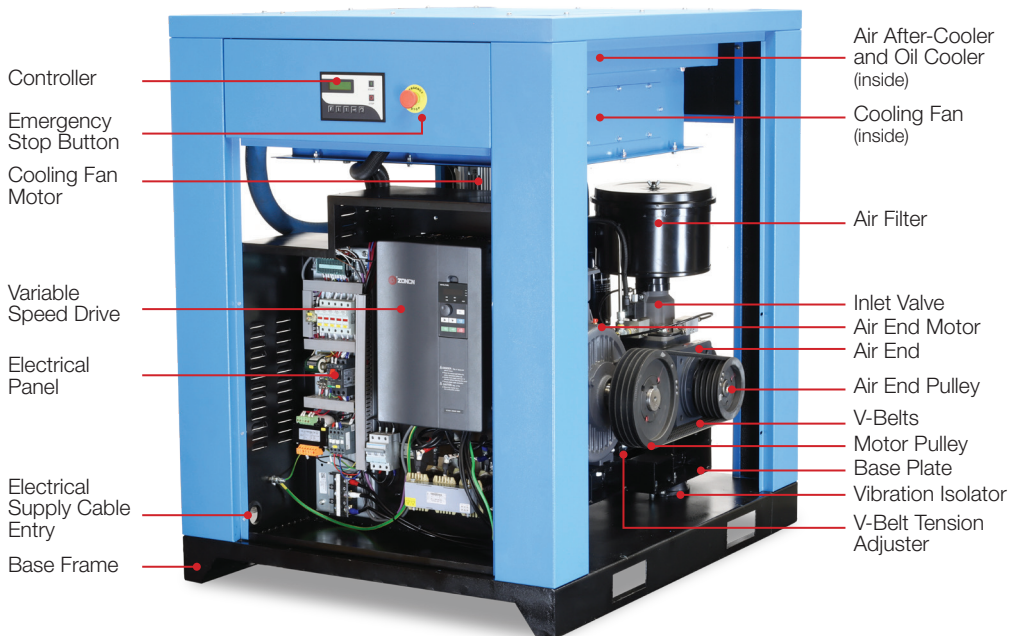
Lift-off cabinet panels and ample internal machinery space provide unhindered access for maintenance tasks.

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

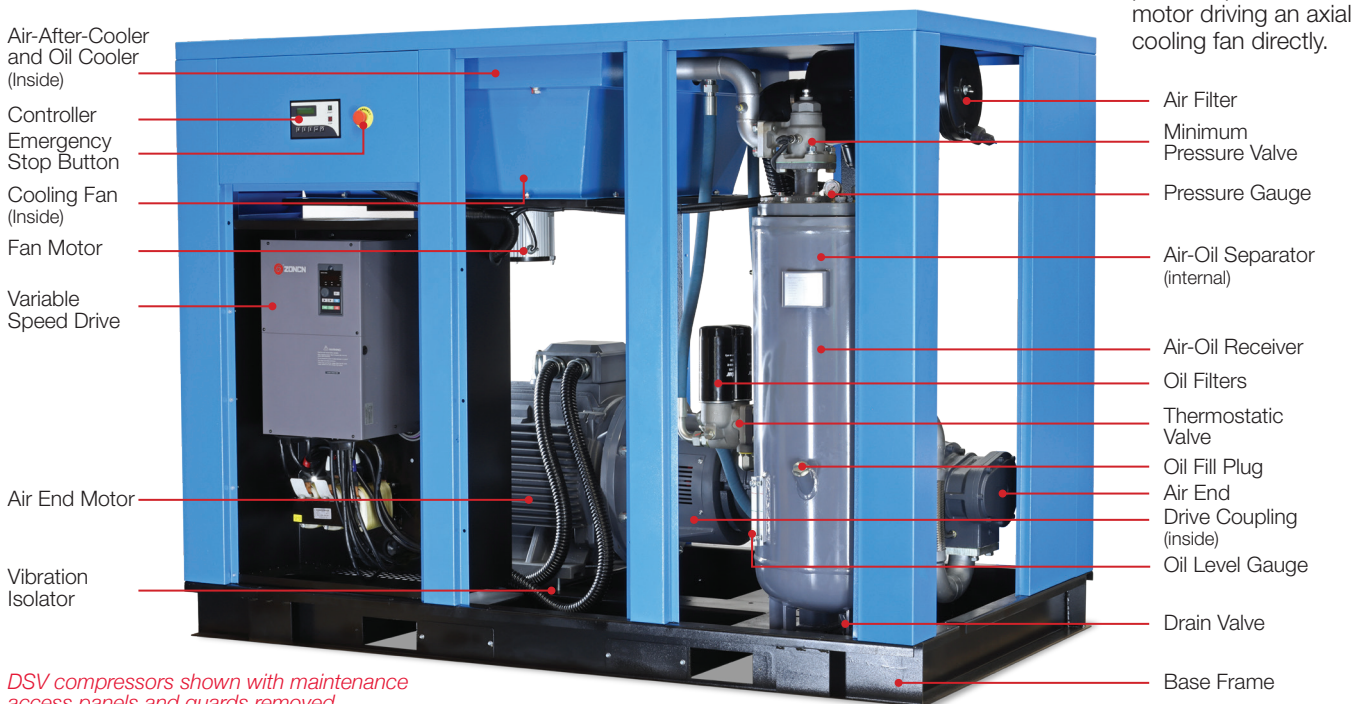
→ Design Configurations



← **Models DSV8 to DSV15**
 Compact under and over arrangement comprising a double-ended shaft motor driving both an air end by V-belts and a radial cooling fan directly.



← **Models DSV18 to DSV45**
 Traditional side by side arrangement with a main motor driving only the air end by V-belts plus a separate motor driving an axial cooling fan directly.



↓ **Models DSV55 to DSV90**
 Modern inline arrangement featuring a main motor driving only the geared air end by direct coupling plus a separate motor driving an axial cooling fan directly.

DSV compressors shown with maintenance access panels and guards removed

→ Specifications

MODEL	Free Air Delivery m ³ /min			Motor kW	Noise @ 1 m dB(A)	Air Outlet inch	Dimensions mm			Weight kg
	8 bar	10 bar	13 bar				W	D	H	
DSV8	0.41 - 1.02	0.38 - 0.95	0.33 - 0.83	7.5	68	3/4	880	880	1,075	318
DSV11	0.66 - 1.65	0.60 - 1.50	0.56 - 1.40	11	68	3/4	880	880	1,075	368
DSV15	0.96 - 2.40	0.82 - 2.05	0.74 - 1.85	15	70	3/4	960	985	1,075	451
DSV18	1.18 - 2.95	1.02 - 2.55	0.92 - 2.30	18.5	70	1-1/4	1,140	880	1,260	512
DSV22	1.44 - 3.60	1.36 - 3.40	1.20 - 3.00	22	70	1-1/4	1,140	880	1,260	548
DSV30	2.08 - 5.20	1.84 - 4.60	1.62 - 4.05	30	72	1-1/2	1,000	1,250	1,310	733
DSV37	2.52 - 6.30	2.30 - 5.75	2.02 - 5.05	37	72	1-1/2	1,000	1,250	1,310	778
DSV45	3.04 - 7.60	2.76 - 6.90	2.52 - 6.30	45	75	2	1,400	1,100	1,600	989
DSV55	3.84 - 9.60	3.84 - 8.26	3.24 - 8.10	55	75	2	2,250	1,344	1,694	1,590
DSV75	5.20 - 13.00	5.20 - 11.18	4.10 - 10.25	75	75	2	2,250	1,344	1,694	1,750
DSV90	6.08 - 15.20	6.08 - 13.07	4.92 - 12.30	90	75	2	2,250	1,344	1,694	1,770

- Free Air Delivery per ISO 1217:2009 Annex E.
- Electricity supply: 400 V, 3-Ph, 50 Hz.
- 1 bar = 100 kPa = 0.1 MPa = 14.5 psi
- 1 m³/min = 1,000 L/min ≈ 16.7 L/s ≈ 35.3 cfm

→ Accessories and Packages

A full range of matching vertical air receivers, refrigerant dryers and in-line filters is available to complement the Senator DSV Series compressors. These can be purchased separately or together with the compressor in an optimally pre-configured package.

Senator compressed air system packages are suitable for most industrial applications and provide the best possible combination of performance, safety and affordability.



DSV8, 11 & 15



DSV18 & 22



DSV30 & 37

→ Customer and Product Support

Comprehensive pre-delivery inspection and full-load testing of each compressor is carried out in Australia.

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

12-month parts and labour warranty to protect your investment.



DSV45



DSV55, 75 & 90

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Specifications are subject to change without notice. 2024-04-02