

SENATOR

INDUSTRIAL AIR COMPRESSORS

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environ



DS Series 4 to 90 kW

Rotary Screw Air Compressors

0.50 to 15.20 m³/min

8 to 13 bar



The new **Senator DS Series** comprises an extensive range of base-mounted air compressor sets that can reliably perform at 100% duty cycle in industrial applications. They are ideally suited for workplaces that have a steady demand for compressed air.

The designs have been extensively proven throughout Asia and Europe with thousands of units already in service. Further refinement of the DS 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 complemented by a full suite of heavy-duty components that altogether provide you with an unbeatable price-performance choice.

→ EU COMP Rotary Screw Air End



Oil lubricated, precision engineered and ultra reliable EU COMP air ends are a standout feature of the Senator DS 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.
- Electrical phase reversal and abnormal current and voltage protection.
- Over pressure and under / over temperature protection.
- 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.
- Sequential control of up to eight interconnected DS Series compressors.
- Modbus RS-485 data communication for standalone compressors.

→ 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 DS4 to DS45).

Ultra reliable direct-drive transmission is virtually maintenance-free and runs precisely with negligible energy loss (models DS55 to DS90).

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.

Star-delta motor starter reduces peak energy demand and shock-loading of the compressor's mechanical and electrical systems.

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.

Adjustable modulating control functionality is built-in to the inlet valve for continuous flow rate regulation if desired (models DS55 to DS90).

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

External spin-on (\leq DS6) or internal cartridge (\geq DS8) 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 (models DS8 and larger).

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.

→ Accessories and Packages

A full range of matching vertical air receivers, refrigerant dryers and in-line filters is available to complement the Senator DS 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.

→ 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.

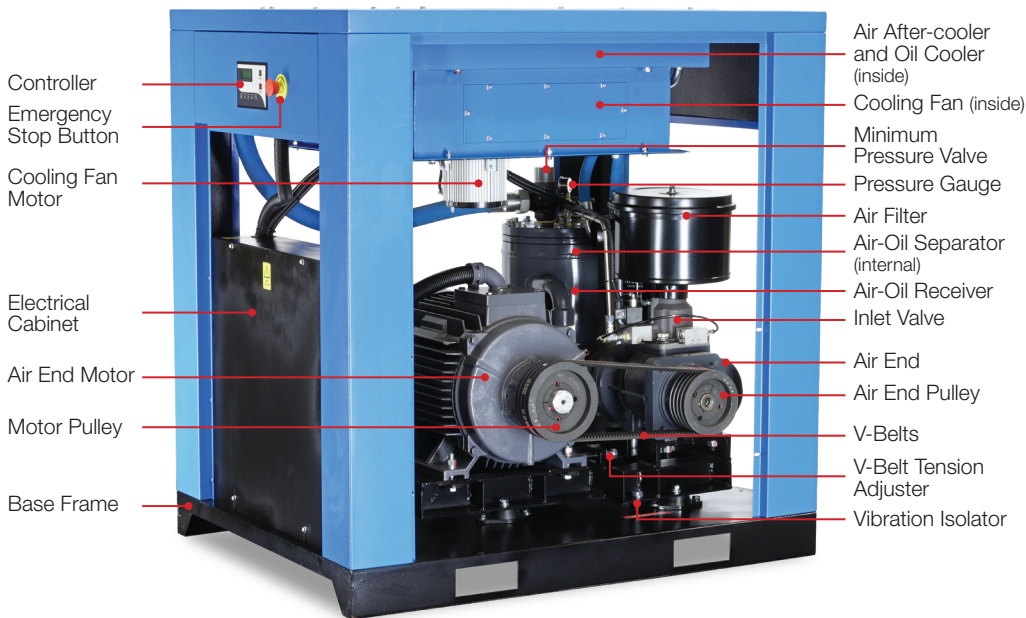
→ Design Configurations



- Air Filter
- V-Belt Tension Adjuster
- Inlet Valve
- Air End Pulley
- V-Belts
- Electrical Cabinet
- Motor Pulley
- Vibration Isolator
- Electrical Supply Cable Entry

- Emergency Stop Button
- Controller
- Pressure Gauge
- Minimum Pressure Valve
- Safety Valve
- Air-Oil Separator (internal on DS8 to DS15)
- Oil Fill Plug
- Thermostatic Valve
- Air-Oil Receiver
- Oil Level Gauge
- Oil Filter
- Drain Valve
- Base Frame

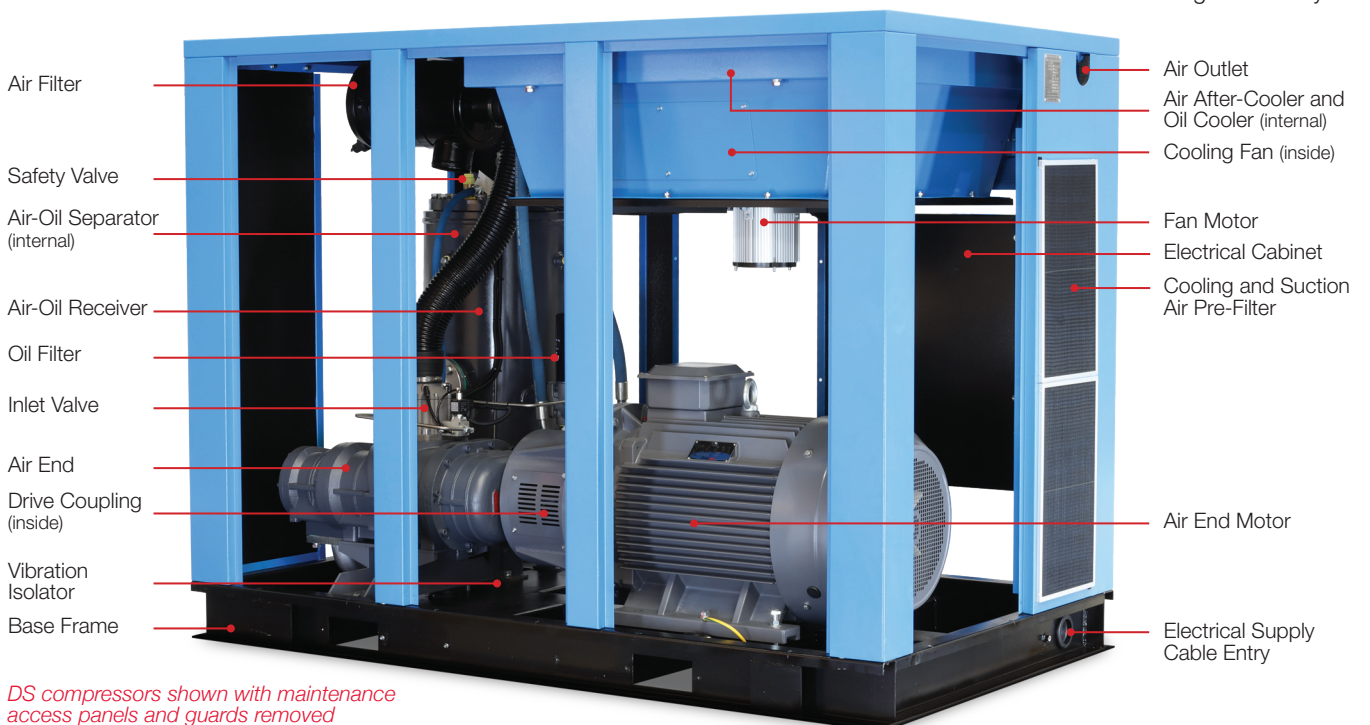
← Models DS4 to DS15
 Compact under and over arrangement comprising a double-ended shaft motor driving both an air end by V-belts and a radial cooling fan directly.



- Controller
- Emergency Stop Button
- Cooling Fan Motor
- Electrical Cabinet
- Air End Motor
- Motor Pulley
- Base Frame

- Air After-cooler and Oil Cooler (inside)
- Cooling Fan (inside)
- Minimum Pressure Valve
- Pressure Gauge
- Air Filter
- Air-Oil Separator (internal)
- Air-Oil Receiver
- Inlet Valve
- Air End
- Air End Pulley
- V-Belts
- V-Belt Tension Adjuster
- Vibration Isolator

← Models DS18 to DS45
 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.



- Air Filter
- Safety Valve
- Air-Oil Separator (internal)
- Air-Oil Receiver
- Oil Filter
- Inlet Valve
- Air End
- Drive Coupling (inside)
- Vibration Isolator
- Base Frame

- Air Outlet
- Air After-Cooler and Oil Cooler (internal)
- Cooling Fan (inside)
- Fan Motor
- Electrical Cabinet
- Cooling and Suction Air Pre-Filter
- Air End Motor
- Electrical Supply Cable Entry

↓ Models DS55 to DS90
 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.

DS compressors shown with maintenance access panels and guards removed

→ Specifications

MODEL	Free Air Delivery m ³ /min			Motor	Noise @ 1 m	Air Outlet	Dimensions mm			Weight
	8 bar	10 bar	13 bar	kW	dB(A)	inch	W	D	H	kg
DS4	0.50	0.40	0.35	4	65	1/2	660	600	890	209
DS6	0.75	0.65	0.50	5.5	65	1/2	660	600	890	210
DS8	1.02	0.95	0.83	7.5	66	3/4	800	800	995	312
DS11	1.65	1.50	1.40	11	67	3/4	880	830	1,075	362
DS15	2.40	2.05	1.85	15	68	3/4	880	830	1,075	423
DS18	2.95	2.55	2.30	18.5	70	1-1/4	1,050	880	1,260	502
DS22	3.60	3.40	3.00	22	70	1-1/4	1,050	880	1,260	529
DS30	5.20	4.60	4.05	30	72	1-1/2	1,000	1,250	1,310	723
DS37	6.30	5.75	5.05	37	72	1-1/2	1,000	1,250	1,310	751
DS45	7.60	6.90	6.30	45	75	2	1,400	1,100	1,600	952
DS55	9.60	8.80	8.10	55	75	2	2,250	1,344	1,694	1,500
DS75	13.00	11.70	10.25	75	75	2	2,250	1,344	1,694	1,660
DS90	15.20	13.60	12.30	90	75	2	2,250	1,344	1,694	1,680

- 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



DS4 & 6



DS8, 11 & 15



DS18 & 22



DS30 & 37



DS45



DS55, 75 & 90

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