

# SENATOR

INDUSTRIAL AIR COMPRESSORS

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environ



## CS and CSV Series 4 to 15 kW

Rotary Screw Air Compressor

4-in-1 Air Stations

0.66 to 2.62 m<sup>3</sup>/min

7 to 10 bar



The **Senator CS and CSV Series** 4-in-1 compressed air stations comprise a rotary screw compressor, air receiver tank, refrigerant dryer and both pre- and post-filters in a single integrated package. Save on floor space and installation cost by choosing one of these ready-to-run units that will dependably provide your business with clean and dry compressed air.

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

Industrial applications typically have fluctuating compressed air usage that can be most efficiently fulfilled by the variable speed drive CSV Series, which saves energy by continuously adjusting the compressor's output to match air demand.

## → Features and Benefits

**Compact turn-key compressed air station** offers a convenient plug-and-play solution with the lowest installation cost and space requirements.

**Soundproofed cabinet and anti-vibration mounting** of rotating components enables the unit to be installed directly at the work site.

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

**High efficiency, MEPS compliant electric motor** reduces energy consumption and carbon footprint.

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

**Largest-in-class 600 litre air receiver tank** provides ample air storage capacity to prevent excessive system pressure fluctuations and facilitates more effective condensate removal.

**Star-delta motor starter** on CS models reduces both peak electrical demand and mechanical shock-loading during compressor start-up.

**Microprocessor-based variable speed drive (VSD)** on CSV models provides optimised motor speed and power control under all operating conditions.

**Multi-function electronic controller** with LED display serves as a user-friendly interface for compressor operation, systems monitoring and protection, and maintenance scheduling. Sequential control and remote start/stop capable.

**Refrigerant dryer** in its own thermally segregated compartment continuously removes moisture from the compressed air stream.

**Two compressed air filters with element condition gauges** remove particulates down to 0.01 micron and limit oil carry-over to 0.01 ppm.

**Timer drain valves** plumbed to a single connection point facilitate automatic, clean and safe disposal of water condensate from the air receiver tank, dryer and filters.

**Lift-off cabinet panels** are easily removable for maintenance access.

**Spin-on oil filter and air/oil separator elements** minimise service downtime.

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

## → Energy Saving CSV Series

**Energy consumption comprises about 75% of the total annual cost** for 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 CSV Series variable-speed compressors can use up to 30% less electricity** than comparable fixed-speed models. In the above example, this could add up to a cost saving of approximately \$2,000 per year.

**A Senator CSV Series compressor is the energy smart choice** whether for a new installation or a replacement upgrade. It will pay for itself many times over in electricity cost savings.

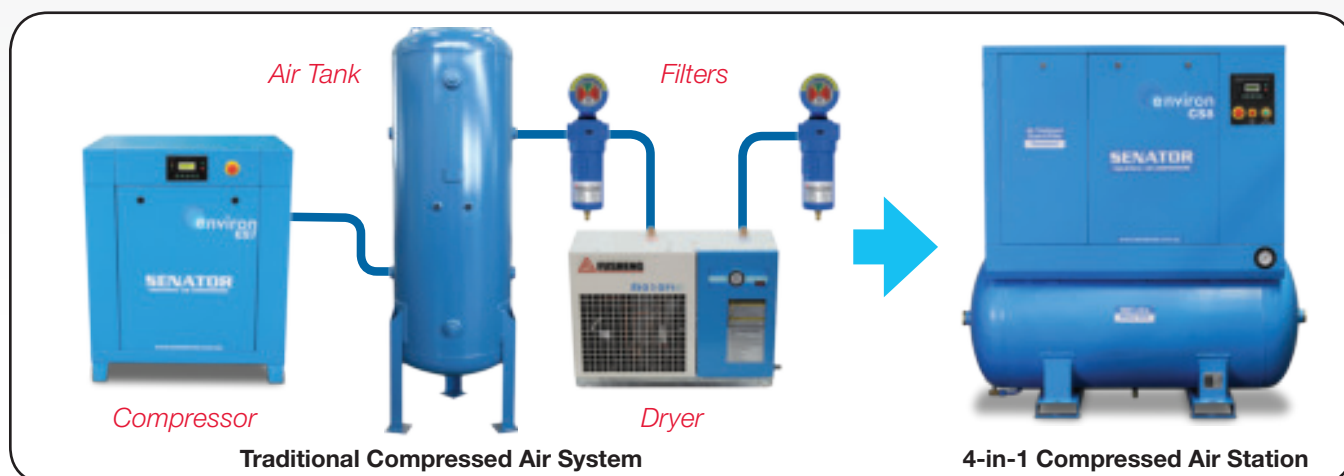
## → Customer and Product Support

**100-point pre-delivery inspection and full-load testing** of each compressor is carried out in Australia before dispatch.

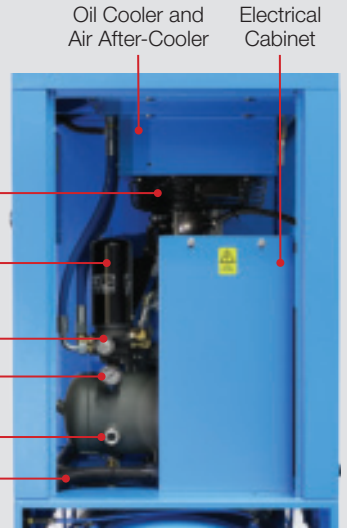
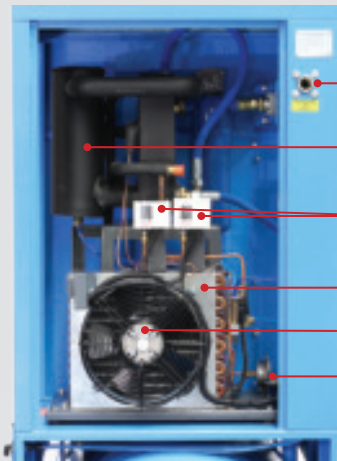
**Australia-wide dealer network** offering sales, installation, service and genuine spare parts backup.

**12-month parts and labour factory-backed warranty.**

## → Compact and Efficient Solution



# Equipment Design Details

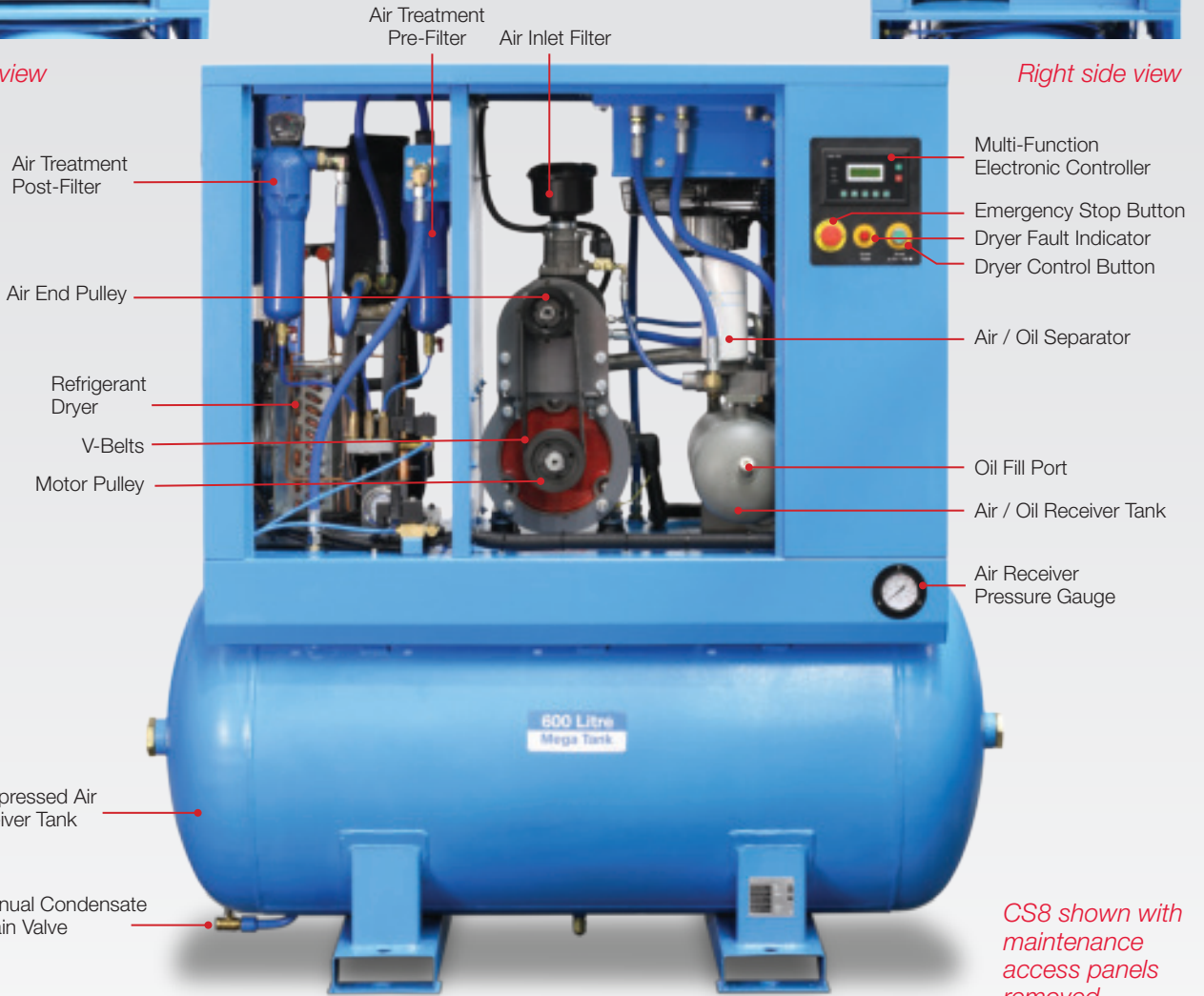


Left side view

Right side view

- Compressed Air Outlet
- Heat Exchanger
- Refrigerant Pressure Switches
- Condenser
- Dryer Cooling Fan
- Dryer Refrigerant Pressure Gauge

- Oil Cooler and Air After-Cooler
- Electrical Cabinet
- Cooling Fan
- Oil Filter
- Combination Valve
- Air / Oil Receiver Pressure Gauge
- Oil Level Gauge
- Oil Drain Valve



- Air Treatment Pre-Filter
- Air Inlet Filter
- Air Treatment Post-Filter
- Air End Pulley
- Refrigerant Dryer
- V-Belts
- Motor Pulley

- Multi-Function Electronic Controller
- Emergency Stop Button
- Dryer Fault Indicator
- Dryer Control Button
- Air / Oil Separator
- Oil Fill Port
- Air / Oil Receiver Tank
- Air Receiver Pressure Gauge

- Compressed Air Receiver Tank
- Manual Condensate Drain Valve

CS8 shown with maintenance access panels removed



CS8 rear view

- Compressor Access Panel
- Air Inlet Pre-Filter
- Electricity Supply Entry
- Automatic Condensate Drain Outlet
- Compressed Air Outlet
- Air Treatment Access Panels

## Multi-Function Electronic Controllers



CSV Series Controller



CS Series Controller



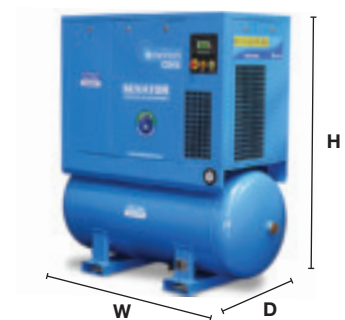
# Specifications

Parameter	Unit	CS Series					CSV Series			
		CS4	CS6	CS8	CS11	CS15	CSV8	CSV11	CSV15	
Free Air Delivery * #	@ 7 bar	m <sup>3</sup> /min	0.66	0.89	1.20	1.88	2.62	0.48-1.20	0.75-1.88	1.05-2.62
	@ 102 psi	cfm	23	31	42	66	93	17-42	26-66	37-93
	@ 8 bar	m <sup>3</sup> /min	0.60	0.82	1.10	1.78	2.45	0.44-1.10	0.71-1.78	0.98-2.45
	@ 116 psi	cfm	21	29	39	63	87	16-39	25-63	35-87
	@ 10 bar	m <sup>3</sup> /min	0.50	0.70	0.99	1.57	2.17	0.40-0.99	0.63-1.57	0.87-2.17
	@ 145 psi	cfm	18	25	35	55	77	14-35	22-55	31-77
Motor ^	Power	kW	4	5.5	7.5	11	15	7.5	11	15
		hp	5.5	7.5	10	15	20	10	15	20
Tank	Volume	Litre	600	600	600	600	600	600	600	600
Noise Level	@ 1 m	dB(A)	62	67	68	70	72	69	71	73
Air Outlet	Size	BSP	3/4" F	3/4" F	3/4" F	1" F	1" F	3/4" F	1" F	1" F
Dimensions	W	cm	173	173	173	173	173	173	173	173
	D	cm	78	78	78	78	78	78	78	78
	H	cm	178	178	178	187	187	178	187	187
Weight	Wet	kg	524	546	562	689	704	584	710	734

\* Per ISO 1217:2009 Annexes C and E.

# 8 bar (116 psi) configuration is standard.

^ Electricity supply: 415 V, 3-Phase, 50 Hz.



**AUTHORISED SENATOR DEALER:**

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