Atlas Copco

Oil-injected rotary screw compressors G 90-250 (90-250 kW) / G 110-160 VSD (110-160 kW)





Sustainable Productivity



Reliable technology in a robust design

Atlas Copco has a long, successful history of designing and building rugged and reliable air compressors to provide compressed air even in the harshest conditions. The G 90-250 and G 110-160 VSD air compressors are designed according to this proud tradition. Their filtration process produces reliable compressed air to avoid costly downtime and production delays. Their robust design ensures processes will function continuously even in dusty and harsh conditions. Furthermore, G 90-250 and G 110-160 VSD air compressors are easy to install and use: they require minimal on-site installation work while operation and maintenance are simple.



CEMENT INDUSTRY

RELIABILITY IN A DUSTY ENVIRONMENT

Compressed air is used for many applications in the cement industry which include dust collectors, air knives, pneumatic clutches, pneumatic actuators and dust bag filtration systems. Thanks to the high reliability of Atlas Copco's G 90-250 and G 110-160 VSD air compressors, the cement production lines will stay up and running, day in, day out.



MINING INDUSTRY

ROBUSTNESS AND RELIABILITY

Compressed air is vital for the mining industry, especially underground where other types of energy could lead to an explosion hazard. Applications include dust bag filtration, service air, ventilation air and pneumatic tools. The reliability and robustness of G 90-250 and G 110-160 VSD air compressors will accomplish the job even in the harshest conditions.



POWER PLANTS

SMOOTH AND COST-EFFECTIVE OPERATION

Power plants run round-the-clock to supply vital energy to industry and consumers. A continuous supply of compressed air is absolutely critical for trouble-free operation. G 90-250 and G 110-160 VSD compressors provide a reliable source of compressed air for applications such as silt blowing and fly ash handling.



GENERAL INDUSTRY

A SAFE AND RELIABLE POWER SOURCE

Many industrial companies use compressed air in their daily operations. Applications include pneumatic tools for cutting, drilling, hammering and grinding; pneumatic actuators and valves; ventilation systems; packing and palleting machinery and conveyor systems. Atlas Copco's G 90-250 and G 110-160 VSD compressors are designed for ultimate performance and reliability.



HIGH RELIABILITY

A reliable supply of compressed air is essential to make sure that production runs smoothly and efficiently. High-end features and generous safety margins stand for high reliability and continuous production. Heavy-duty air filters remove dust, maximize the lifetime of parts and ensure reliable operation.



HIGH EFFICIENCY

G 90-250 and G 110-160 VSD air compressors are designed to be highly energy efficient. The superior screw element provides the optimum combination of maximum free air delivery and low energy consumption. The state-of-the-art compressor element is powered by high efficiency electric motors, contributing to maximum package efficiency.

EASY INSTALLATION, USE AND MAINTENANCE

G 90-250 and G 110-160 VSD compressors are truly plug-and-run machines. Installation, operation and maintenance are simple. Complex connections or in-depth technical knowledge are unnecessary. Just put the compressor on a flat floor, connect the power supply and the pipe connections and press the start button to run the compressor.





ASSURING YOUR PEACE OF MIND

Through continuous investment in our competent, committed and efficient service organization, Atlas Copco ensures superior customer value by maximizing productivity. With a presence in over 180 countries, we offer professional and timely service through interaction and involvement. Uptime is ensured by dedicated technicians and 24/7 availability.

G 90-250: Reliability, efficiency and simplicity



1

High-efficiency motor

- TEFC IP55 motor (Class F insulation B rise) protects against dust and chemicals.
- Long-term stable operation even in harsh environments up to 46°C (115°F).

2

Easy to install, use and service

- Standard container: easy installation and no foundations needed.
- · Completely integrated, silenced package.
- Easy to transport and simple maintenance.

3

Reliable unloading/loading valve

- Assures constant optimized pressure in the system resulting in high energy savings.
- Simple, maintenance-free set-up with few moving parts.

4

Efficient air-oil separation

- Reduction of pressure drops and energy costs.
- Low oil consumption ensures minimal maintenance costs and long compressor lifetime.

5

State-of-the-art screw element

- Patented asymmetric element profile and innovatively designed bearings offer low wear and high reliability.
- Optimal working point of the element for low energy consumption.

6

Superior air filtration

- Two-stage dust removal and filtering system with efficiency of up to 99.9% even in heavy-duty environments (particles ≥ 3 micron).
- Protects compressor parts and components, ensures air quality and extends the service life of the overall air system.

7

Heavy-duty oil filter

- Outstanding oil purification capability ensures a clean compressor oil system.
- Long service period and easy and quick filter change reduce maintenance costs.

8

Air-water separator (standard)

- Integrated air-water separator efficiently separates condensate.
- Large-sized water outlet avoids risk of clogging and ensures worry-free operation.

A step ahead in control and monitoring

Being able to control and monitor your compressed air system has considerable advantages. The complete G 90-250 range offers a great variety of features that lower energy costs, reduce maintenance time and costs, and limit stress on the entire air system.



Elektronikon[®] Controller

- User-friendly: intuitive navigation system.
- $\boldsymbol{\cdot}$ Continuous and accurate monitoring of the compressor's operating parameters.
- Reliable, durable keyboard.

ES - Multi-control, multi-benefits

- · Automatic selection of the most efficient mix of compressors to run.
- Elimination of blow-off regulation.
- · Continuous electrical power optimization.

Protect your performance & production

Untreated compressed air contains moisture and possibly dust particles that can damage your air system and contaminate your end product. That is why Atlas Copco provides a complete range of air treatment solutions to protect investments, equipment, production processes and end products.



Increase production reliability and safeguard quality

The air treatment solutions produce clean, dry air to enhance your system's reliability, avoid costly downtime and production delays and protect your production and reputation on the market. Building on know-how and years of experience, the entire Atlas Copco quality air range is produced in-house and tested using the most stringent methods in the industry. Taking technology to a new level, these products achieve maximum energy and cost savings.

VSD: Driving down your energy costs

Over 70% of a compressor's lifecycle cost is taken up by the energy it consumes. Moreover, the generation of compressed air can account for more than 40% of a plant's total electricity bill. To cut your energy costs, several decades ago Atlas Copco pioneered Variable Speed Drive (VSD) technology. VSD leads to major energy savings, while protecting the environment for future generations. Thanks to continual investments in this technology, Atlas Copco offers the most advanced VSD compressors on the market.

WHAT IS VSD TECHNOLOGY?

In almost every production environment, air demand fluctuates depending on different factors (time of the day, week or even month). Extensive measurements and studies of compressed air demand profiles show that many compressors have substantial variations in air demand. Only 8% of all installations have a more stable air demand. Tests prove that, even in this case, VSD compressors save energy.

Profile 1



64% of all installations

 Factory working 24 hrs/day: low demand at night & high demand during the day

Profile 2



28% of all installations

 Factory working 2 shifts/day, no weekend work: erratically varying air demand

Profile 3



8% of all installations

 Factory working 2 shifts/day, no weekend work: typical 'fixed' speed application



FIND OUT HOW MUCH YOU CAN SAVE

Atlas Copco can help you map the load/air demand profile of your current compressor installation and indicate potential energy savings with VSD compressors. For more information, please contact your local Atlas Copco representative.



G 160 VSD

HIGHLY PERFORMANT VSD TECHNOLOGY



WHAT IS UNIQUE ABOUT THE INTEGRATED ATLAS COPCO G VSD?

- 1 The Elektronikon[®] controls both the compressor and the integrated converter, ensuring maximum machine **safety** within parameters.
- **2** Flexible pressure selection from 4 to 8.5 bar with electronic gearing reduces electricity costs.
- **3** Specific converter and motor design (with protected bearings) for the **highest efficiency across the speed range**.
- 4 Electric motor specifically designed for low operating speeds with clear attention to motor cooling and compressor cooling requirements.

- **5** All Atlas Copco G VSD compressors are **EMC tested and certified**. Compressor operation does not influence external sources and vice versa.
- **6** Mechanical enhancements ensure that all components operate below critical vibration levels throughout the entire compressor speed range.
- 7 No 'speed windows' that can jeopardize energy savings or the stability of the net pressure. Turndown capability of the compressor is maximized to 80-85%.
- 8 Net pressure band is maintained within 0.10 bar, 1.5 psi.



Technical specifications G 90-250

Compressor	Maximur pres	n working sure	Ca	apacity FAD	ity FAD ⁽¹⁾ Installed motor powe		otor power	Noise level ⁽²⁾	Unit Weight	
type	bar(e)	psig	l/s	m³/min	cfm	kW	hp	Aircooled / Water Cooled	kg	lb
50 Hz										
G 90 - 7.5	7.5	109	280	16.8	593					
G 90 -8.5	8.5	123	263	15.8	557	00	100		2700	5050
G 90 - 10	10.0	145	240	14.4	509	90	120	/8//6	2700	5952
G 90 - 14	14.0	203	185	11.1	392					
G 110 - 7.5	7.5	109	334	20.0	708	110	150	75	3000	6614
G 110 -8.5	8.5	123	313	18.8	662	110	150	75	3000	6614
G 110 - 10	10.0	145	284	17.0	603	110	150	75	3000	6614
G 110 - 14	14.0	203	231	13.9	488	110	150	75	3000	6614
G 132 - 7.5	7.5	109	401	24.1	850	132	175	75	3830	8444
G 132 -8.5	8.5	123	381	22.9	807	132	175	75	3830	8444
G 132 - 10	10.0	145	350	21.0	741	132	175	75	3830	8444
G 132 - 14	14.0	203	280	16.8	592	132	175	75	3830	8444
G 160 - 7.5	7.5	109	506	30.4	1072	160	215	75	3830	8444
G 160 -8.5	8.5	123	482	28.9	1022	160	215	75	3830	8444
G 160 - 10	10.0	145	446	26.8	945	160	215	75	3830	8444
G 160 - 14	14.0	203	361	21.7	764	160	215	75	3830	8444
G 200 - 7.5	7.5	109	592	35.5	1254	200	270	77	5405	11916
G 200 -8.5	8.5	123	545	32.7	1155	200	270	77	5405	11916
G 200 - 10	10.0	145	513	30.8	1087	200	270	77	5405	11916
G 250 - 7.5	7.5	109	681	40.9	1443	250	335	77	5695	12555
G 250 -8.5	8.5	123	667	40.0	1413	250	335	77	5695	12555
G 250 - 10	10.0	145	626	37.7	1326	250	335	77	5695	12555

(1) Unit performance : Measured according to ISO1217
(2) Noise level : Measured acccording to ISO 2151:2004 using ISO 9614/2

Reference conditions:

- Absolute inlet pressure 1 bar (14,5psi)
- Intake air temperature 20°C (68°F)
- Cooling medium temperature 20°C (68°F)

FAD is measured at the following working pressures:

- 7.5 bar variants at 7 bar
- 8.5 bar variants at 8 bar
- 10 bar variants at 9.5bar
- 14 bar variants at 13.5 bar

Dimensions									
Air-cooled / water-cooled									
TVDE		_	۱	N	н				
ITPE	mm	inch	mm	inch	mm	inch			
G 90-110	2779	110	1720	68	2010	79			
G 132-160	2779	110	2005	79	2010	79			
G 200-250	3386	133	2120	83	2400	94			

A complete scope to meet every need

● Included as standard

\checkmark	Air intake filter	\checkmark	Built-in electrical starters
V	Air intake valve	\checkmark	Flexible vibration dampers
V	Aftercooler/Oilcooler (air or watercooled)	V	Air/oil separator
V	Cooling fan for aircooled units	\checkmark	Elektronikon® controller system
V	Ventilation fan for watercooled units	V	Full load/no load regulation system
V	Water separators	V	Silencing canopy
V	Oil filters	V	Single point inlet and outlet connections
V	Complete air/oil/water circuit	\checkmark	Structure steel skid - no foundations needed
V	IP 55, Class F drive motor		

Technical specifications G 110 & G 160 VSD (50 Hz)

Compressor	Maximum working pressure		Capacity FAD (1)			Installed motor power		Noise level ⁽²⁾ dB(A)	Unit Weight	
type	bar(e)	psig	l/s	m³/min	cfm	kW	hp	Aircooled / Water Cooled	kg	lb
	4	58	331	19.9	701	110	150	77	3608	7954
G 110 VSD - 8.5	7	102	329	19.7	697	110	150	77	3608	7954
	8	116	315	18.9	667	110	150	77	3608	7954
	8	116	311	18.7	659	110	150	77	3608	7954
G 110 VSD - 14	9.5	138	291	17.5	617	110	150	77	3608	7954
	13.5	196	230	13.8	487	110	150	77	3608	7954
	4	58	493	29.6	1045	160	215	77	4068	8968
G 160 VSD - 8.5	7	102	492	29.5	1042	160	215	77	4068	8968
	8	116	472	28.3	1000	160	215	77	4068	8968
G 160 VSD - 14	8	116	472	28.3	1000	160	215	77	4068	8968
	9.5	138	444	26.6	941	160	215	77	4068	8968
	13.5	196	354	21.2	750	160	215	77	4068	8968

(1) Unit performance : Measured according to ISO1217
(2) Noise level : Measured acccording to ISO 2151:2004 using ISO 9614/2

Reference conditions:

- Absolute inlet pressure 1 bar (14.5 psi)
- Intake air temperature 20°C (68°F)
- Cooling medium temperature 20°C (68°F)

Maximum working pressures for G VSD: For 50 Hz : 8.5 bar and 14 bar

Dimensions								
Air-cooled / water-cooled								
TVDE	1	_	١	N	н			
ITFE	mm	inch	mm	inch	mm	inch		
G 110 VSD	2780	110	1720	68	2010	80		
G 160 VSD	2780	110	2005	68	2010	80		



Atlas Copco

- Global Industrial group, headquartered in Stockholm, Sweden.
- More than 136 years of experience.
- More than 33,000 employees worldwide, with sales turnover, over EUR 7.3 billion.
- Manufacturing facilities in 20 countries across 4 continents.
- State-of-the-art manufacturing facility in India.
- Sales, Service & Dealer network in 170 markets.



ISO 9001 From design to production and delivery Atlas Copco compressors adhere to the ISO 9001 Management Systems requirements.

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ISO 14001 Atlas Copco's Environmental Management System forms an Integral part of each business process.