

# Atlas Copco

Oil-injected Rotary Screw Compressors  
GA 5-11/GA 5-15 VSD®



*Sustainable Productivity*

*Atlas Copco*

# The ultimate smart solution that fits

Atlas Copco's GA compressors bring outstanding performance, flexible operation and high productivity, while minimizing the total cost of ownership. With a choice of two premium compressor series – the GA 5-11 and GA 5-15 VSD – you will certainly find the compressed air solution that perfectly matches your specific requirements. With products that are built to perform in even the harshest environments, Atlas Copco commits to keeping your production running in the most efficient way.

## Highest reliability



The GA & GA VSD series are designed, manufactured and tested in accordance with ISO 9001, ISO 14001 and ISO 1217, Ed. 3, Annex C. Ensuring a long and trouble-free life at the lowest operating cost, the GA contains the latest generation of Atlas Copco's innovative oil-injected screw element.

## Minimized energy costs



Energy can represent over 80% of a compressor's life cycle costs (LCC). The generation of compressed air can even account for more than 40% of a plant's total electricity bill. Through the use of Atlas Copco's highly efficient element and state-of-the-art packaging, GA compressors can minimize energy costs and overall compressor life cycle costs. Furthermore, the GA VSD additionally reduces energy costs by up to 35% by automatically adjusting the air supply to the customer's air demand.

## Air system integration



The GA WorkPlace Air System can be installed close to the point of use thanks to its low noise operation. In addition, as air treatment equipment is integrated and the tank is mounted under the compressor, the need for a separate compressor room is eliminated. Moreover, all compressors are delivered ready for use, reducing installation costs to a minimum.



# GA & GA VSD: matching all your needs



## GA 5-11: the premium solution

By far the most reliable tank-mounted premium solution that supplies high-quality compressed air, plug-and-play.

- Premium GA quality and improved serviceability at the lowest life cycle cost.
- Total control and assured efficiency with the new Elektronikon® controller.
- Extreme low power consumption and noise emission.
- Excellent-quality compressed air thanks to the new, integrated dryer range.
- Fully customizable with various options to meet every need.

## GA 5-15 VSD: ultimate energy savings

Minimized energy consumption for the most demanding applications, making major energy savings a reality.

- GA 15 VSD: brand-new model in the VSD range.
- Average energy savings of 35%.
- Advanced Variable Speed Drive technology.
- Flexible pressure selection: 5.5-13 bar.
- Excellent-quality compressed air at the lowest energy cost thanks to the new, integrated dryer range.
- User-friendly Elektronikon® graphic controller: the most advanced on the market.

# GA 5-11: the premium solution

Able to tackle extreme duties as daily challenges, Atlas Copco's high-performance tank-mounted GA compressors beat any workshop solution. Ready to supply high-quality air, they keep the air network clean and your production up and running.

## Built to last

- Outfitted with a new generation element with improved bearings and seal arrangement.
- Unequaled reliability during the system's lifetime thanks to the belt-driven drive train, newly developed in accordance with the highest industry standards.
- Maximized durability thanks to the usage of advanced development tools and extensive real-life training.
- Fit for environments with ambient temperatures up to 46°C due to improved component design.

## Protecting your production

- Web based online compressor status viewer on new Elektronikon® for remote monitoring using a standard Ethernet connection.
- Protection from oil contamination: extremely low oil carry-over thanks to the vertical design of the oil vessel.
- Protection of downstream air equipment in all working conditions: the integrated dryer avoids condensation and corrosion in the network. Optional filters can be added to obtain air quality up to class 1 level (<0.01 ppm).
- Water separator included as standard.
- Water separation of nearly 100% in all conditions with the standard electronic no-loss drain in combination with the integrated water separator in the dryer.

## Minimized energy costs

- The Free Air Delivery is increased up to 8% and power consumption is reduced by 7% thanks to optimized packaging and the new compressor element.
- Extremely low losses of compressed air during load/unload cycle thanks to minimized oil vessel size.
- Additional energy savings with the dryer's no-loss electronic drain.
- The GA 5-11's compression element is combined with a class 1 efficiency motor resulting in minimized energy costs.

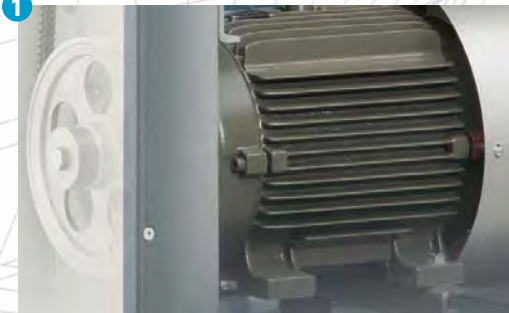
## Effortless maintenance

- Minimized service costs thanks to high-quality and easily replaceable consumables with a long lifetime and easy servicing.
- The Elektronikon®'s monitoring features include new service and warning indications, error detection and compressor shut-down. The optional Elektronikon® graphic controller provides further enhanced visual service indications and warnings.

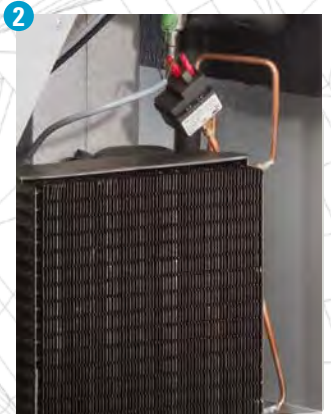
## Easy installation

- Improved sound quality and noise levels starting from 60 dB(A).
- A true plug-and-play solution ready to be installed close to the point of use, the GA is ideal for installation companies and OEMs. Optionally, the system can be expanded with an integrated dryer, air filters and a factory-mounted 270L receiver (optional 500L).
- Effortless transportation by forklift.
- Standard equipped with a 3-metre power supply cable.





Optimized drive train



Integrated dryer



New generation element



Elektronikon® controller



Oil filter & oil separator



Combi-cooler (oil & air)

# GA 5-15 VSD: ultimate energy savers

The GA 5-11 VSD range is the ideal solution for productions with a fluctuating air demand. By monitoring the outlet pressure, the Elektronikon® steers the Variable Speed Drive (VSD) continuously to adjust the air flow to the demand. Energy savings of up to 35% become a reality thanks to the high turndown ratio, the new fan Saver Cycle and dryer saver cycle. The brand-new GA 15 VSD is the latest extension to this successful GA 5-11 VSD range.

## Built to last

- Outfitted with a new generation element with improved bearings and seal arrangement.
- Unequaled reliability during the system's lifetime thanks to the belt-driven drive train, newly developed in accordance with the highest industry standards.
- Maximized durability thanks to the usage of advanced development tools and extensive real-life training.
- Fit for environments with ambient temperatures up to 46°C due to improved component design.

## Protecting your production

- Excellent quality air thanks to the integrated dryer range with counterflow heat exchanger & integrated water separator: the integrated dryer can be outfitted with optional DD and PD filters, resulting in oil carry-over as low as 0.01 ppm.
- Web based online compressor status viewer on new Elektronikon® graphic controller for remote monitoring using a standard Ethernet connection.
- Water separator included as standard.
- Water separation of nearly 100% in all conditions with the standard electronic no-loss drain in combination with the integrated water separator in the dryer.

## Minimized energy costs

- The GA 5-11's compression element is combined with a class 1 efficiency optimized VSD motor resulting in minimized energy costs.
- Standard with new fan Saver Cycle, optimizing oil temperature and saving extra energy costs.
- Energy savings of up to 35% compared to a fixed speed compressor thanks to the combination of VSD technology with the advanced compressor algorithms in the Elektronikon® graphic controller.
- The Free Air Delivery is increased up to 8% and power consumption is reduced by 7% thanks to optimized packaging and the new compressor element.
- Optional centralized control over up to 4 or 6 compressors, without the need for an external control system.

## Effortless maintenance

- The high-tech Elektronikon® graphic controller's monitoring features include warning indications, compressor shut-down, maintenance scheduling and visualization of machine conditions.
- Modular system: the VSD drive makes diagnostics and repairs fast and easy.
- High-quality consumables with a long lifetime (up to 8,000 hours) and easy servicing.
- Connectivity (optional) SMS warning, logging and trending functionalities.

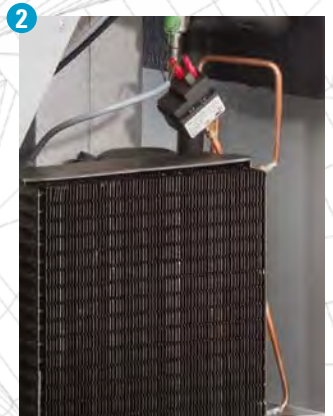
## Easy installation

- Thanks to the improved sound quality and noise levels (62-69 dB(A)), the GA can be placed close to the point of use, resulting in minimized installation costs and reduced risk of air leakage and flow losses.
- Tank-mounted under compressor, integrated dryer and 3-metre power supply cable (standard equipment).
- A wide range of factory-mounted options to customize the GA VSD to suit specific needs: air and condensation treatment, special protection, air inlet protections and communication features.





Elektronikon® graphic controller



Integrated dryer



Combi-cooler (oil & air)



Controlled cooling fan



New VSD cubicle



New generation element

# A step ahead in monitoring and controls

The next-generation Elektronikon® operating system offers a great variety of control and monitoring features to increase efficiency and reliability. The Elektronikon® controls the main drive motor and regulates system pressure within a predefined and narrow pressure band.



## Elektronikon® controller

- Improved ease of use: intuitive navigation system with clear pictograms and extra 4th LED indicator for service.
- Free online compressor status visualization through a web browser using a standard Ethernet connection.
- Easy to upgrade.
- Maximum reliability: more durable keyboard.

### Key features

- Automatic restart after voltage failure.
- Dual pressure set point.
- Delayed Second Stop function.
- Option to upgrade to the advanced Elektronikon® graphic controller.



## Elektronikon® graphic controller

- User-friendliness: 3.5-inch high-definition color display with clear pictograms and extra 4th LED indicator for service.
- Internet-based compressor visualization using a standard Ethernet connection.
- Increased reliability: new, user-friendly, multilingual user interface and durable keyboard.
- Standard on VSD machines and optional on fixed speed models.

### Key features

- Automatic restart after voltage failure.
- More flexibility: four different week-schedules that can be programmed for a period of 10 consecutive weeks.
- On-screen Delayed Second Stop function and VSD savings indication.
- Graphical indication Serviceplan.
- Factory-fitted remote control and connectivity functions are optionally available.
- Software upgrade available to control up to 4 or 6 compressors by installing the optional integrated multi compressor control to further reduce the total power consumption.
- Dual pressure band clock-based.

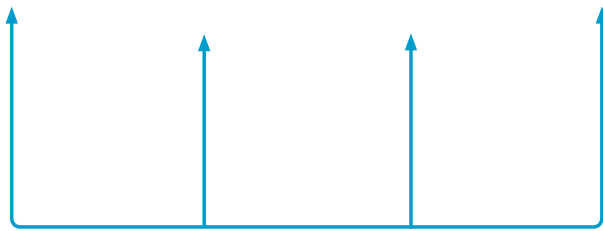


## Free online visualization

Monitor your compressors over the Ethernet with the new Elektronikon® controllers. Monitoring features include warning indications, compressor shut-down and maintenance scheduling, all possible with the free online compressor status visualization.

SMS service, trending and remote history events are optional through the connectivity program.





## Optional integrated compressor controller

To reduce system pressure and energy consumption in installations of up to 4 (ES4i) or 6 (ES6i) compressors, the optional integrated compressor controller can be installed with a simple license.

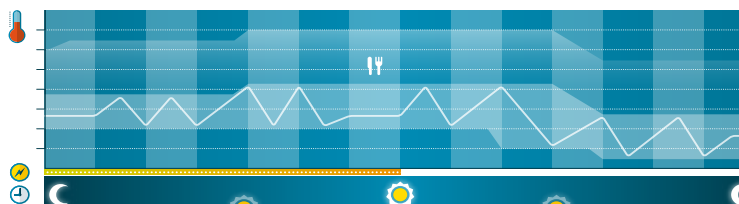
## Dual pressure set point & delayed second stop

The production process creates fluctuating levels of demand which can cause energy losses in low use periods. The Elektronikon® can manually or automatically create two different system pressure bands to optimize energy use and reduce costs at low use times. In addition, the sophisticated Delayed Second Stop (DSS) runs the drive motor only when needed. As the desired system pressure is maintained while the drive motor's run time is minimized, energy consumption is kept at a minimum.



## Saver cycle

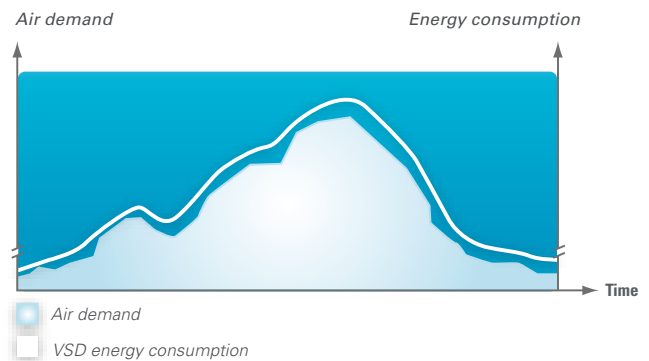
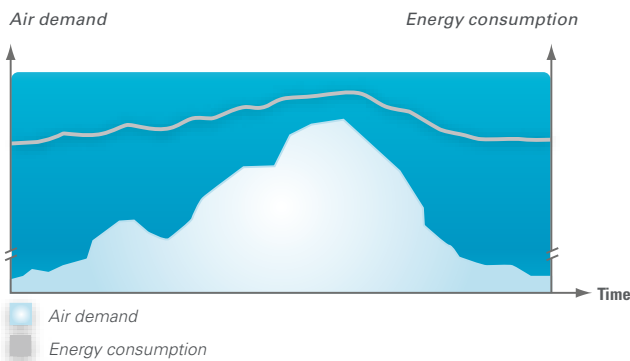
Saver cycle technology reduces energy consumption. The Elektronikon® is linked to both saver cycles: fan and dryer. Monitoring the oil temperature, the fan saver cycle regulates the fan and minimizes energy use. Using an ambient sensor to monitor the required dew point suppression, the dryer saver cycle starts and stops the dryer when the compressor has stopped, minimizing energy use and protecting the air system from corrosion.



# VSD: driving down energy costs

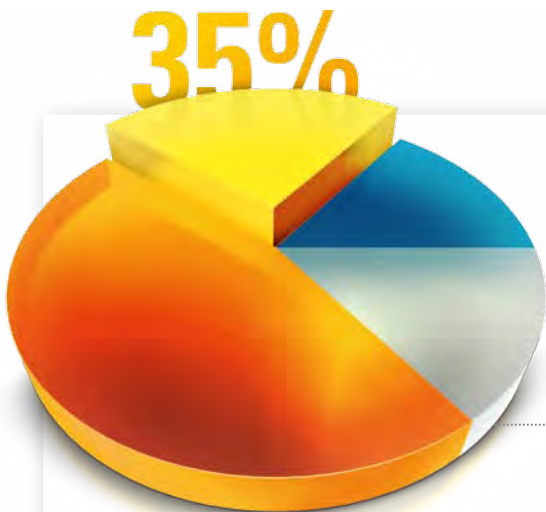
Energy typically represents over 80% of a compressor's life cycle cost. Looking continuously to innovate and reduce customer costs, Atlas Copco pioneered the Variable Speed Drive technology (VSD) in 1994. VSD stands for major energy savings, while protecting the environment for future generations. Due to our ongoing investments in R&D, Atlas Copco offers the widest range of integrated VSD compressors on the market.

## The high price of fluctuating demand VSD: variable volume, controlled costs



Traditional compressors working with a full load, no load control operate between two set pressure points. When maximum pressure is reached the compressor goes off load. During periods of medium to low air demand, the no load power consumption can be excessive – wasting large amounts of energy.

Because there is no unnecessary power generated, the GA VSD can reduce energy costs by 35% or more. Life cycle costs (LCC) of the compressor can be reduced by an average of 22%. In general, the extra cost of a VSD compressor compared to a fixed speed one can be earned back after just one to two years.



### Energy savings of up to 35%

Atlas Copco's VSD technology closely follows the air demand by automatically adjusting the motor speed. This results in large energy savings of up to 35%. The life cycle cost of a compressor can be cut by an average of 22%. In addition, lowered system pressure with VSD minimizes energy use across your production dramatically.

### Total compressor life cycle cost

- Energy
- Investment
- Energy savings with VSD
- Maintenance

## 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.**

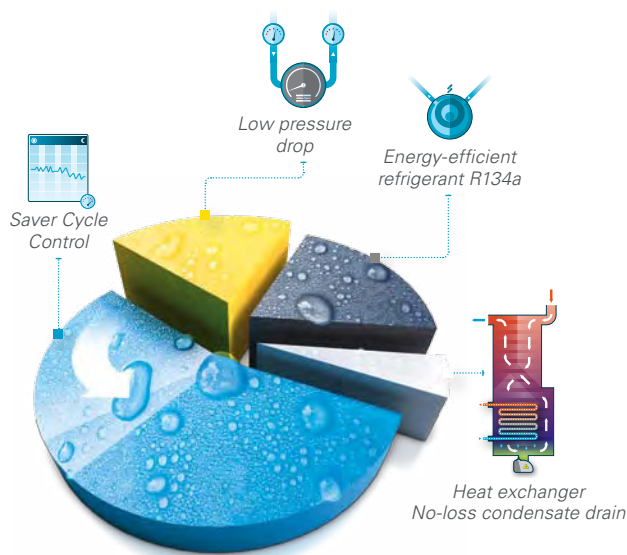
# Excellence in quality air

Untreated compressed air contains moisture, aerosols and dirt particles that can damage your air system and contaminate your end product. The resulting maintenance costs can far exceed air treatment costs. Our compressors provide the clean, dry air that improves your system's reliability, avoiding costly downtime and production delays, and safeguarding the quality of your products. Clean, treated air also reduces the risk of corrosion and leaks in your compressed air system, leading to substantial cost savings. Furthermore, with leaks and energy waste minimized and the unsafe disposal of untreated condensate eliminated, you can protect the environment and conform to stringent international regulations.

## Savings features

### Up to 30% energy savings with new range of integrated dryers.

- Global warming potential has been reduced significantly by an average of 50% by reducing the amount of refrigerant in the new dryer.
- Use of energy-efficient refrigerant R134a reduces operating costs.
- Environmentally friendly characteristics.
- Unique Saver Cycle Control, with ambient temperature sensor and based on dryer load and relative humidity of compressed air, saves energy at partial load.
- Low pressure drop heat exchanger with integrated water separator.
- Zero waste of compressed air thanks to no-loss condensate drain.
- Pressure dew point of 3°C (100% relative humidity at 20°C).



## Integrated purity

The optional DD/PD filters and integrated refrigerant air dryer (IFD) efficiently remove moisture, aerosols and dirt particles to protect your investment. This quality air prolongs the life of downstream equipment, increasing efficiency and ensuring quality in your final product.

ISO quality class*	Dirt particle size	Water pressure dew point**	Oil concentration
3.-4	3 microns	-	2 ppm
3.4.4	3 microns	+3°C, 37°F	2 ppm
2.4.2	1 micron	+3°C, 37°F	0.1 ppm
1.4.1	0.01 microns	+3°C, 37°F	0.01 ppm

\* The table values are maximum limits according to the respective ISO quality class.

\*\* Water pressure dew point based on 100% RH at 20°C/68°F.

# Tailored to your needs

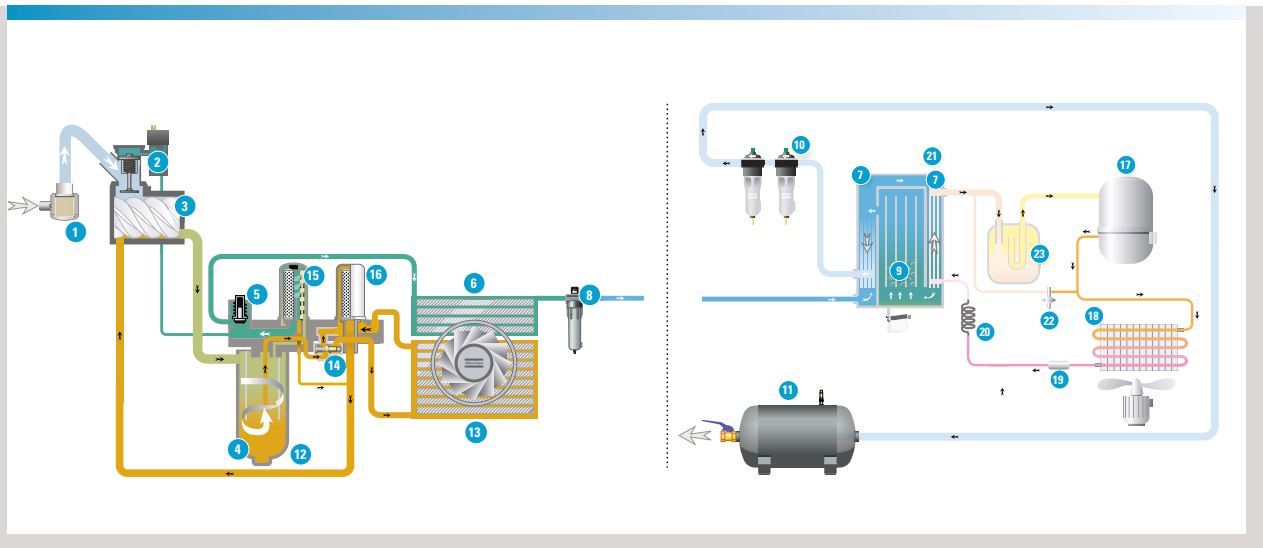
Some applications may need or may benefit from additional options and more refined control and air treatment systems. To meet these needs, Atlas Copco has developed options and easily integrated compatible equipment providing the lowest cost compressed air.

## Options

Option	GA 5-11	GA 5-15 VSD
Integrated filter kit class 1	•	•
Integrated filter kit class 2	•	•
Dryer by-pass	•	•
Integrated oil/water separator (OSD)	•	•
Electronic water drain (EWD) on pack unit (Cooler)	•	•
500 liter air receiver	•	•
Electronic water drain (EWD) on 500L vessel	•	•
Phase sequence relay	•	N/A
Tropical thermostat	•	N/A
Freeze protection	•	•
Heavy duty inlet filter	•	•
Rain protection	•	•
Main power isolator switch	•	•
Upgrade Elektronikon® graphic	•	standard
Relays for ES 100 sequence selector	•	N/A
Roto-Xtend duty oil	•	•
Central Control license 4 (ES 4i) or 6 (ES 6i) machines on Elektronikon® graphic	•	•
Modulating control	•	N/A
High ambient temperature versions	•	N/A
Food-grade oil	•	•
Dryer Saver Cycle	•	standard
Compressor inlet Pre-filter	•	•
5% Choke on VSD*		•
IT ancillaries*		•
AIRConnect™*	•	•
Motor space heater + thermistors*	•	N/A

\* under construction

# Flow chart



- |   |  |
|---|--|
|  Intake air                          |  Water                                |
|  Air/oil mixture                   |  Refrigerant gas/liquid mixture     |
|  Oil                               |  High pressure, hot refrigerant gas |
|  Compressed air without free water |  Low pressure, cool refrigerant gas |
|  Wet compressed air                |  High pressure refrigerant liquid   |
|  Dry compressed air                |  Low pressure refrigerant liquid    |

## AIR FLOW

1. Air intake filter
2. Air intake valve
3. Compression element
4. Air/oil separator vessel
5. Minimum pressure valve
6. After-cooler
7. Air-air heat exchanger
8. Water separator (pack only)
9. Water separator with drain
10. DD/PD filters (optional)
11. Air receiver

## OIL FLOW

12. Oil
13. Oil cooler
14. Thermostatic bypass valve
15. Oil separator
16. Oil filter

## REFRIGERANT FLOW

17. Refrigerant compressor
18. Condenser
19. Liquid refrigerant dryer/filter
20. Capilar
21. Evaporator
22. Hot gas bypass valve
23. Air intake valve

# Technical specifications GA 5-7-11

COMPRESSOR TYPE	Working pressure WorkPlace		Capacity FAD* min-max			Installed motor power		Noise level**	Weight (kg)				
	bar(e)	psig	l/s	m <sup>3</sup> /h	cfm	kW	hp		WorkPlace		WorkPlace Full Feature		
									Floor-mounted	Tank-mounted	Floor-mounted	Tank-mounted	
50 Hz VERSION													
GA 5	7.5	7.5	109	15.0	54.0	31.7	5.5	7.5	60	257	317	300	360
	8.5	8.5	123	13.2	47.5	27.9	5.5	7.5	60	257	317	300	360
	10	10	145	11.7	42.1	24.7	5.5	7.5	60	257	317	300	360
	13	13	189	8.4	30.2	17.7	5.5	7.5	60	257	317	300	360
GA 7	7.5	7.5	109	21.8	78.5	46.0	7.5	10	61	270	330	315	375
	8.5	8.5	123	19.6	70.6	42.0	7.5	10	61	270	330	315	375
	10	10	145	17.2	61.9	36.4	7.5	10	61	270	330	315	375
	13	13	189	14.2	51.1	30.0	7.5	10	61	270	330	315	375
GA 11	7.5	7.5	109	30.7	110.5	64.8	11	15	62	293	353	343	403
	8.5	8.5	123	28.3	101.9	59.7	11	15	62	293	353	343	403
	10	10	145	26.0	93.6	54.9	11	15	62	293	353	343	403
	13	13	189	22.0	79.2	46.5	11	15	62	293	353	343	403

COMPRESSOR TYPE	Max. Working pressure WorkPlace		Capacity FAD* min-max			Installed motor power		Noise level**	Weight (kg/lbs)				
	bar(e)	psig	l/s	m <sup>3</sup> /h	cfm	kW	hp		WorkPlace		WorkPlace Full Feature		
									Floor-mounted	Tank-mounted	Floor-mounted	Tank-mounted	
60 Hz VERSION													
GA 5	100	7.4	107	15.0	54.0	31.7	5.5	7.5	60	257	317	300	360
	125	9.1	132	13.2	47.5	27.9	5.5	7.5	60	257	317	300	360
	150	10.8	157	11.7	42.1	24.7	5.5	7.5	60	257	317	300	360
	175	12.5	181	8.5	30.6	17.7	5.5	7.5	60	257	317	300	360
GA 7	100	7.4	107	21.0	75.6	44.3	7.5	10	61	270	330	315	375
	125	9.1	132	19.6	70.6	41.5	7.5	10	61	270	330	315	375
	150	10.8	157	17.2	61.9	36.4	7.5	10	61	270	330	315	375
	175	12.5	181	14.2	51.1	30.0	7.5	10	61	270	330	315	375
GA 11	100	7.4	107	30.4	109.4	64.1	11	15	62	293	353	343	403
	125	9.1	132	27.0	97.2	57.0	11	15	62	293	353	343	403
	150	10.8	157	24.9	89.6	52.5	11	15	62	293	353	343	403
	175	12.5	181	22.0	79.2	46.4	11	15	62	293	353	343	403

\* Unit performance measured according to ISO 1217, Ed. 3, Annex C-1996.

\*\* Mean noise level measured at a distance of 1 m according to ISO 2151; tolerance 3 dB(A).

Reference conditions:

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

FAD is measured at the following working pressures:

- 7.5 bar versions at 7 bar(e).
- 8.5 bar versions at 8 bar(e).
- 10 bar versions at 9.5 bar(e).
- 13 bar versions at 12.5 bar(e).

Maximum working pressure for VSD machines:

- 13 bar(e) (188 psig)

GA 5-7-11 pack & GA 5-7-11-15 VSD pack  
(floor-mounted)

GA 5-7-11 pack & GA 5-7-11-15 VSD pack  
(tank-mounted)



floor-mounted



tank-mounted

# Technical specifications GA 5-7-11-15 VSD

COMPRESSOR TYPE	Max. Working pressure WorkPlace		Capacity FAD* min-max			Installed motor power		Noise level**	Weight (kg/lbs)			
	bar(e)	psig	l/s	m³/h	cfm	kW	hp		WorkPlace		WorkPlace Full Feature	
								Floor-mounted	Tank-mounted	Floor-mounted	Tank-mounted	
<b>50/60 Hz VERSION</b>												
GA 5 VSD	5.5	80	6.2-15.4	22.3-55.4	12.9-32.6	5.5	7.5	62	275	335	318	378
	7.5	109	5.7-15.0	20.5-54.0	12.7-33.0	5.5	7.5	62	275	335	318	378
	10	145	7.1-13.2	25.6-47.5	15.0-25.7	5.5	7.5	62	275	335	318	378
	13	188	8.9-10	32-36.0	18.3-22.0	5.5	7.5	62	275	335	318	378
GA 7 VSD	5.5	80	5.1-20.5	18.4-73.8	11.2-45.1	7.5	10	64	280	340	325	385
	7.5	109	4.0-20.3	14.4-73.0	8.4-42.9	7.5	10	64	280	340	325	385
	10	145	7.2-16.8	25.9-60.5	15.2-35.5	7.5	10	64	280	340	325	385
	13	188	6.4-13.8	23.0-49.7	13.5-29.2	7.5	10	64	280	340	325	385
GA 11 VSD	5.5	80	6.6-31.0	23.8-111.6	14.0-65.6	11	15	66	293	353	343	403
	7.5	109	6.5-30.7	23.4-110.5	13.7-67.5	11	15	66	293	353	343	403
	10	145	8.7-24.1	31.3-86.8	19.1-53.0	11	15	66	293	353	343	403
	13	188	7.9-20.7	28.4-74.5	16.7-45.5	11	15	66	293	353	343	403
GA 15 VSD	5.5	80	9.0-37.5	32.4-135.0	19.8-82.5	15	20	69	300	360	352	412
	7.5	109	9.1-37.1	32.8-133.6	20.0-81.6	15	20	69	300	360	352	412
	10	145	8.8-30.9	31.7-111.2	19.4-68.0	15	20	69	300	360	352	412
	13	188	8.5-24.8	30.6-89.3	18.7-54.6	15	20	69	300	360	352	412

\* Unit performance measured according to ISO 1217, Ed. 3, Annex C-1996.

\*\* Mean noise level measured at a distance of 1 m according to ISO 2151; tolerance 3 dB(A).

Reference conditions:

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

FAD is measured at the following working pressures:

- 7.5 bar versions at 7 bar(e).
- 8.5 bar versions at 8 bar(e).
- 10 bar versions at 9.5 bar(e).
- 13 bar versions at 12.5 bar(e).

Maximum working pressure for VSD machines:

- 13 bar(e) (188 psig)

GA 5-7-11 FF & GA 5-7-11-15 VSD FF  
(floor-mounted)



floor-mounted

GA 5-7-11 FF & GA 5-7-11-15 VSD FF  
(tank-mounted)



tank-mounted



### **Driven by innovation**

With more than 135 years of innovation and experience, Atlas Copco will deliver the products and services to help maximize your company's efficiency and productivity. As an industry leader, we are dedicated to offering high air quality at the lowest possible cost of ownership. Through continuous innovation, we strive to safeguard your bottom line and bring you peace of mind.



### **Building on interaction**

As part of our long-term relationship with our customers, we have accumulated extensive knowledge of a wide diversity of processes, needs and objectives. This gives us the flexibility to adapt and efficiently produce customized compressed air solutions that meet and exceed your expectations.



### **A committed business partner**

With a presence in over 160 countries, we will deliver high-quality customer service anywhere, anytime. Our highly skilled technicians are available 24/7 and are supported by an efficient logistics organization, ensuring fast delivery of genuine spare parts when you need them. We are committed to providing the best possible know-how and technology to help your company produce, grow, and succeed. With Atlas Copco you can rest assured that your superior productivity is our first concern!

