Atlas Copco
Oil-injected Rotary Screw Compressors
GA 30+-90/GA 37-90 VSD (30-90 kW/40-125 hp)

Sustainable Productivity
The ultimate smart solution, driven by efficiency

Atlas Copco’s GA 30-90 compressors bring you outstanding sustainability, reliability and performance, while minimizing the total cost of ownership. A choice of three premium compressor types (GA VSD, GA+ and GA) provides you with the compressed air solution that perfectly matches your requirements with clear value propositions. Built to perform even in the harshest environments, these compressors keep your production running efficiently.

NEW HEIGHTS IN SUSTAINABILITY
The GA 30-90 family enables you to realize sustainable productivity through lower lifecycle costs and maximum uptime. IE3 or NEMA Premium Efficiency motors in combination with the highly efficient element minimize operating cost. The integrated dryer R410A reduces ozone depletion and protects the environment. Maximum uptime is achieved by maintenance from one side and complete drive train accessibility.

NEW MILESTONES IN RELIABILITY
The reliability of the GA 30-90 range starts with the cool canopy and low element outlet temperatures, an oversized separate oil cooler and an aftercooler with patented integrated mechanical separator. The three-stage air/oil separation ensures low oil consumption. All electrical cubicles are in overpressure, preventing electrically conductive dust, thus increasing the lifetime of electrical components.

NEW MILESTONES IN RELIABILITY

BENCHMARKING PERFORMANCE
Outstanding performance is ensured by design, with IE3 or NEMA Premium Efficiency motors in combination with Atlas Copco’s highly efficient element and an oversized cooling arrangement resulting in significant energy savings. Internal pressure drops from inlet to discharge are optimized. Efficient smart compressor controls and Atlas Copco algorithms minimize the working pressure band, saving energy.

GA VSD: ULTIMATE ENERGY SAVER
- Unique integrated Variable Speed Drive (VSD) technology for on average 35% energy savings.
- Industry-leading operating turn-down range and flexible pressure selection: 4-13 bar.
- Start under system pressure due to special VSD motor, no idling time.
- Integrated Dryer Saver Cycle saves up to 60% of the dryer’s electrical consumption.
- Smart Elektronikon® graphic compressor controller with high-definition color display working to a set point minimizes pressure drops.

GA+: INDUSTRY-LEADING PERFORMANCE
- Industry-leading Free Air Delivery and low energy consumption.
- IE3 / NEMA Premium Efficiency motor combined with highly efficient element.
- Low noise emission suitable for workplace installation.
- Environmentally-friendly R410A integrated dryer reduces footprint and pressure drops.
- Smart Elektronikon® graphic compressor controller with high-definition color display.

GA: PREMIUM COMPRESSOR
- High performance Free Air Delivery.
- IE2 / NEMA Premium Efficiency motor in combination with highly efficient element.
- Premium quality at the lowest initial investment.
- Efficient environmentally-friendly R410A integrated dryer reduces footprint and pressure drops.
- Ensured efficiency of Elektronikon® controller with connectivity.
VSD: Driving down your energy costs

Over 80% 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, Atlas Copco pioneered Variable Speed Drive (VSD) technology in the compressed air industry. VSD leads to major energy savings, while protecting the environment for future generations. Thanks to continual investments in this technology, Atlas Copco offers the widest range of integrated VSD compressors on the market.

WHY ATLAS COPCO VARIABLE SPEED DRIVE TECHNOLOGY?

- On average 35% energy savings during fluctuations in production demand with an extensive turndown range.
- Integrated Elektronikon® Graphic controller controls the motor speed and high efficiency frequency inverter.
- Compressor can start/stop under full system pressure without the need to unload with special VSD motor.
- Eliminates peak current penalty during start-up.
- Minimizes system leakage due to a lower system pressure.

In almost every production environment, air demand fluctuates depending on different factors such as the 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.

On Average 35% Energy Savings

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

Total Compressor Lifecycle Cost

On average 35% energy savings with GA VSD technology. The lifecycle cost of a compressor can be cut by an average of 22%. In addition, lowered system pressure with GA VSD dramatically minimizes energy use across your production.

How Ga VSD Technology Saves Energy

Contact your local Atlas Copco representative for an audit of your compressed air system. A real-time measurement simulation and audit report can be provided with recommendations for additional savings and sizing to meet your compressed air needs.

What is Unique About the Integrated Atlas Copco GA 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 13 bar with electronic gearing reduces electricity costs.
3. Special electric motor specifically designed for VSD operation (inverter duty motor). Bearings are protected against induced bearing currents. Both motor and converter are perfectly tuned for highest efficiency across the entire 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 GA VSD compressors are EMC tested and certified. External sources do not influence compressor operation, nor does the compressor affect the operation of other instruments via emissions or via the power supply line.
6. Mechanical enhancements ensure that all components operate below critical vibration levels throughout the entire compressor speed range.
7. A highly efficient frequency converter in a cool overpressure cubicle ensures stable operation in high ambient temperatures up to 50°C/122°F*.
8. No ‘speed windows’ that can jeopardize the energy savings and the stable net pressure. Turndown capability of the compressor is maximized to 80-85%.
9. The cubicle cooling booster increases the lifetime of electrical components due to a cool cubicle in overpressure and reduced dust ingress.
10. Net pressure band is maintained within 0.10 bar, 1.5 psi.
High reliability and smart energy

1. **Maintenance-free drive system**
   - 100% maintenance-free; totally enclosed and protected against dirt and dust.
   - Suitable for harsh environments.
   - High-efficiency drive arrangement; no coupling or slippage losses.
   - Standard up to 46°C/115°F and for high ambient version 55°C/131°F.

2. **IE3 / NEMA Premium Efficiency electrical motors**
   - IP55, insulation Class F, B rise.
   - Non-drive side bearing greased for life.
   - Designed for continuous operation in harsh environments.

3. **Robust spin-on oil filter**
   - High-efficiency, removing 300% smaller particles than a conventional filter.
   - Integrated bypass valve with the oil filter.

4. **SIL Smart inlet lock system for GA VSD compressors**
   - Superior designed vacuum and air pressure controlled valve with minimal pressure drop and no springs.
   - Smart stop/start which eliminates back-pressure oil vapor.

5. **Separate oversized oil cooler and aftercooler**
   - Low element outlet temperatures, ensuring long oil lifetime.
   - Removal of nearly 100% condensate by mechanical separator.
   - No consumables.
   - Eliminates possibility of thermal shocks in coolers.

6. **Electronic no-loss water drain**
   - Ensures constant removal of condensate.
   - Integrated with compressor’s Elektronikon® with warning/alarm features.

7. **Heavy-duty air intake filter**
   - Protects the compressor components by removing 99.9% of dirt particles down to 3 microns.
   - Differential inlet pressure for proactive maintenance while minimizing pressure drop.

8. **Elektronikon® for remote monitoring**
   - Integrated smart algorithms reduce system pressure and energy consumption.
   - Monitoring features include warning indications, maintenance scheduling and online visualization of machine's condition.

9. **Cubicle cooling booster**
   - Cubicle in overpressure minimizes ingress of conductive dust.
   - Electrical components remain cool, enhancing lifetime of components.

10. **Integrated highly efficient R410A dryer**
    - Excellence in air quality.
    - 50% reduction in energy consumption compared to traditional dryers.
    - Zero ozone depletion.
    - Incorporates optional DD and PD filters according to Class 1.4.1.

11. **NEOS drive**
    - Atlas Copco’s in-house designed inverter for GA VSD compressors.
    - IP5X protection degree.
    - A robust, aluminum enclosure for trouble-free operation in the harshest conditions.
    - Fewer components: compact, simple and user-friendly.
A step ahead in monitoring and controls

The next-generation Elektronikon® operating system offers a wide variety of control and monitoring features that allow you to increase your compressor’s efficiency and reliability. To maximize energy efficiency, the Elektronikon® controls the main drive motor and regulates system pressure within a predefined and narrow pressure band.

IMPROVED USER-FRIENDLINESS
- 3.5-inch high-definition color display with clear pictograms and extra 4th LED indicator for service.
- Graphical display of key parameters (day, week, month) and 32 language settings.
- Internet-based compressor visualization using a simple Ethernet connection.
- On-screen Delayed Second Stop function and VSD savings indication.
- Graphical indication Serviceplan, remote control and connectivity functions.
- Software upgrade available to control up to 6 compressors by installing the optional integrated compressor controller.

ONLINE & MOBILE MONITORING
Monitor your compressors over the Ethernet with the new Elektronikon® controller. Monitoring features include warning indications, compressor shut-down and maintenance scheduling. The Atlas Copco App is available for iPhone/Android phones as well as iPad and Android tablets. It allows fingertip monitoring of your compressed air system through your own secured network.

Optional integrated compressor controller

Install, with a simple license, the optional integrated compressor controller and get simple, central control to reduce system pressure and energy consumption in installations of up to 4 (ES4i) or 6 (ES6i) compressors.

DUAL PRESSURE SET POINT & DELAYED SECOND STOP
Most production processes create fluctuating levels of demand which, in turn, can create energy waste in low use periods. Using either the standard or graphic Elektronikon® controller, you 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.

INTEGRATED DRYER SAVER CYCLE
Saver Cycle technology reduces the energy consumption of the integrated refrigerant dryers with the fan in light load applications. Using an ambient sensor to monitor the required dew point suppression, the Elektronikon® starts and stops the dryer and the fan, minimizing energy use and protecting the air system from corrosion.
Excellence in integrated air quality

Untreated compressed air contains moisture, aerosols and dirt particles that can damage your air system and contaminate your end product, resulting in risk of corrosion and compressed air system leaks. Maintenance costs can far exceed air treatment costs. Our compressors provide the clean, dry air that improves your system’s reliability, avoids costly downtime and production delays, and safeguards the quality of your products.

SAVE MONEY AND THE ENVIRONMENT

Avoid risk of corrosion and system leaks, and ensure the effective safe disposal of untreated condensate – all within ISO 14001 standards.

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 air quality prolongs the life of downstream equipment, increasing efficiency and ensuring quality of your final product.

<table>
<thead>
<tr>
<th>ISO quality class*</th>
<th>Dirt particle size</th>
<th>Water pressure dew point**</th>
<th>Oil concentration</th>
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<td>3/4</td>
<td>3 microns</td>
<td>+3°C, 37°F</td>
<td>3 ppm</td>
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<td>3/4</td>
<td>5 microns</td>
<td>+3°C, 37°F</td>
<td>3 ppm</td>
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<td>1/2</td>
<td>10 microns</td>
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<tr>
<td>1/1</td>
<td>0.01 microns</td>
<td>+3°C, 37°F</td>
<td>0.001 ppm</td>
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*The table values reflect the maximum limits according to the temperature ISO gravity class.
**Water pressure dew point based on 100% RH at 20°C/68°F.

ON AVERAGE 50% ENERGY SAVINGS WITH R410A INTEGRATED DRYERS

- Use of energy-efficient refrigerant R410A reduces operating costs.
- R410A refrigerant reduces global warming potential by an average of 50%.
- Environmentally-friendly characteristics: zero ozone depletion.
- Unique Saver Cycle Control, with ambient temperature sensor and based on dryer load and relative humidity of compressed air, saves energy at partial load.
- Heat exchanger cross-flow technology with low pressure drop.
- Zero waste of compressed air thanks to no-loss condensate drain.
- Pressure dew point of 3°C (100% relative humidity at 20°C).

WorkPlace: Compressed air at the point of use

With the industry-leading low noise operation and integration of air and condensate treatment equipment, the GA+ offers complete versatility for your production. The compressor’s integrated design allows it to be placed on the production floor, creating substantial energy savings for your business.

LOW INSTALLATION COSTS

- The GA+ can operate close to the point of use – eliminating the need for a dedicated compressor room.
- The GA+ is delivered ready for use – minimizing production downtime and reducing installation costs.
- Filtration equipment is integrated – reducing the need for costly external piping and minimizing pressure drops.
- Low noise enables the above to be a reality.

REDUCED ENERGY AND MAINTENANCE COSTS

- With less external piping, the GA+ minimizes pressure drop across the system which can reduce energy costs.
- The filtration system produces clean air to prevent network corrosion – minimizing energy, repair and maintenance costs.
- The GA+ operates at the lowest possible system pressure to reduce energy costs thanks to the Elektronikon® advanced monitoring system.

INTEGRATED CONDENSATE MANAGEMENT

- OSCI is an efficient integrated solution that removes oil from condensate.
- Oil carryover contained in condensate can harm the environment.
- Treated condensate protects water, wildlife and ecosystems.
- The delivered water is harmless and can be disposed in a sewage system, reducing disposal costs.
Optimize your system

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

INTEGRATED ENERGY RECOVERY

As much as 90% of the electrical energy used by a compressed air solution is converted into heat. Using Atlas Copco’s integrated energy recovery systems, it is feasible to recover up to 75% of that power input as hot air or hot water without any influence on the compressor’s performance. Through efficient usage of the recovered energy, you bring about important energy cost savings and obtain a high return on investment.

ENERGY RECOVERY APPLICATIONS

- Auxiliary or main heating of warehouses, workshops etc.
- Industrial process heating.
- Water heating for laundries, industrial cleaning and sanitary facilities.
- Canteens and large kitchens.
- Food industry.
- Chemical and pharmaceutical industries.
- Drying processes.

INTTEGRATED FILTER KIT

<table>
<thead>
<tr>
<th>Filter Kit</th>
<th>GA 30-90</th>
<th>GA 75-80VSD</th>
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Air treatment

Protection

Public works

Communication

Oils

General options

*FF units only.  ** Water-cooled units.  *** Includes potential-free contacts: motor running, compressor load/unload.  **** FF units max 60°C, 122°F

Flow charts

VARIABLE SPEED DRIVE: GA VSD

FIXED SPEED: GA* & GA
### Technical specifications GA 30+-90 (50 Hz versions)

<table>
<thead>
<tr>
<th>COMPRESSOR TYPE</th>
<th>Pressure level</th>
<th>Max. working pressure (bar)</th>
<th>Capacity FAD*</th>
<th>Installed motor power</th>
<th>Noise level**</th>
<th>Weight Workplace</th>
<th>Weight Workplace Full Feature</th>
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* Unit performance measured according to ISO 1211, Annex C, Edition 4

Reference conditions:
- Absolute inlet pressure 1 bar (14.5 psig)
- Intake air temperature 20°C, 68°F
- Pressure dew point of integrated refrigerant dryer at reference conditions: 2ºC to 3ºC, 36°F to 37°F.

### Technical specifications GA 30+-90 (60 Hz versions)

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Reference conditions:
- Absolute inlet pressure 1 bar (14.5 psig)
- Intake air temperature 20°C, 68°F
Driven by innovation
With more than 140 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 180 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!