Oil-injected rotary screw compressors

GA 75-110 VSD+ (75-110 kW/100-150 hp)

Sustainable Productivity
**Innovative**
Atlas Copco has turned the compressed air industry on its head by redesigning the conventional layout of a typical air compressor. Instead of the normal space-taking horizontal design, the new GA 75-110 VSD+ has an upright, vertical, low-footprint layout. This saves valuable floor and work space, eases maintenance access, accelerates manufacturing time, and reduces the total cost of ownership for all customers.

**Efficient**
- On average 8% lower Specific Energy Requirement (SER) than the current GA VSD models. Eco-efficient VSD+ reduces energy consumption by on average 50% compared to the current idling models.
- On top of energy savings, Free Air Delivery (FAD) increase of up to 6% over the range.
- The iPM motor outperforms IE4 efficiency levels.

**Reliable**
- Completely enclosed frequency drive and drive train ensure performance even in the harshest environments.
- Based on unique combination of proven technologies and existing components, optimally brought together by Atlas Copco's experience and know-how.

**Smart**
- Easy monitoring and maintenance thanks to the Elektronikon® Graphic controller.
- Maintenance notifications and machine status available via SMARTLINK e-mail or text messages.
- Customized reports on the energy performance of your machine, in compliance with ISO 50001.

**The new revolutionary compressor from Atlas Copco**
Atlas Copco’s GA 75-110 VSD+ brings a game-changing revolution in the compressor industry. It offers Variable Speed Drive as standard, a powerful motor and a compact footprint thanks to its in-house designed iPM (Interior Permanent Magnet) motor technology. The GA 75-110 VSD+ reduces energy consumption by on average 50%, with uptimes assured even in the harshest operational conditions. The GA 75-110 VSD+ is the air compressor of the future, reducing electricity costs to a minimum and maximizing uptime. It fits even in the smallest compressor room. The GA 75-110 VSD+ will set a new standard for years to come, positioning Atlas Copco as a leader in the compressed air industry.
INSIDE THE POWERFUL GA 75-110 VSD+

1. Interior Permanent Magnet (iPM) motor
   - Premium efficiency that exceeds IE4 levels.
   - Compact, customized design for optimal cooling by oil.
   - Designed in-house in Belgium.
   - IP66 versus IP55.
   - No cooling air flow required.
   - Oil-lubricated motor bearing: no (re)grease(ing) and increased uptime.

2. New compressor element
   - Improved efficiency.
   - Made by Atlas Copco.
   - Robust and silent.

3. Direct drive
   - Vertical design, less parts.
   - Oil-cooled, pressure-tight.
   - No gears or belts, no shaft seal.

4. Inlet filter
   - Heavy duty.
   - Pressure drop indicator.

5. Cooling fan
   - Already compliant with future ERP2020 efficiency.
   - Optimized, application-specific design results in low noise and high efficiency.

6. Classic cooler design
   - Integrated water separation.
   - Separate oil/air cooler.
   - Easy access for maintenance.

7. Innovative Neos inverter
   - Atlas Copco’s in-house designed inverter, now also controls iPM motors.
   - IP5x protection.
   - Robust aluminum enclosure for trouble-free operation in the harshest conditions.
   - Fewer components: compact, simple and user-friendly.

8. Integrated dryer
   - Ensures excellence in air quality.
   - Incorporates optional UD+ filter to meet ISO 8573.1 Quality Class 1.4.2.
   - True plug-and-play design eliminates cost of installing a separate dryer.

9. Elektronikon® Graphic controller
   - Integrated smart algorithms reduce system pressure and energy consumption.
   - Monitoring features include warning indications, maintenance scheduling and online visualization of machine’s condition.

10. VSD+ Neos cubicle
    - VSD+ is superior to idling machines.
    - Electrical components remain cool, enhancing lifetime of components.
    - Dedicated Neos drive for iPM technology motors.
    - Heat dissipation of inverter in separate compartment.
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.

Atlas Copco’s GA Variable Speed Drive+ (VSD+) technology closely matches the air demand by automatically adjusting the motor speed. Combined with the innovative design of the iPM (Permanent Magnet) motor, this results in average energy savings of 50% and an average reduction of 37% in the lifecycle cost of a compressor. VSD+ works with in-house designed permanent magnet motors.

**Why Atlas Copco Variable Speed Drive+ technology?**

- On average 50% energy savings with an extensive flow range (20-100%).
- Integrated Elektronikon® Graphic controller controls the motor speed and high efficiency frequency inverter.
- No wasted idling times or blow-off losses during operation.
- 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.

* Compared to fixed speed compressors, based on measurement performed by an independent energy audit agency.
ADVANCED MONITORING, CONTROL & CONNECTIVITY

Whether you call it Industry 4.0 or the Internet of Things (IoT), interconnectivity is the future. The GA 75-110 VSD+ comes fully prepared. Its advanced monitoring, control and connectivity features allow you to optimize compressor performance, resources, efficiency and productivity.

Dual Pressure Set Point
Create two different system pressure bands to reduce energy use and costs during fluctuating demand.

Integrated Saver Cycles
Fan Saver Cycle reduces energy consumption by switching off the fan in light load applications.

Timer
A built-in clock supports any working schedule – per day, per week or customized to your specific situation and needs.

CONNECT SMARTLINK*: Data Monitoring Program
• Remote monitoring that helps you optimize your compressed air system and save energy and costs.
• Provides a complete insight in your compressed air network.
• Anticipates potential problems by warning you up-front.
* Please contact your local sales representative for more information.

EXCELLENCE IN INTEGRATED AIR QUALITY

Untreated compressed air contains moisture and aerosols which increase the risk of corrosion and compressed air system leaks. This can result in a damaged air system and contaminated end products. Maintenance costs can far exceed air treatment costs. The GA 75-110 VSD+ provides the clean, dry air that improves your system’s reliability, avoids costly downtime and production delays, and safeguards the quality of your products.

On average 50% energy savings with newly designed integrated dryers
• Pressure dewpoint of 3°C (37.4°F) (100% relative humidity at 20°C/68°F).
• Heat exchanger cross-flow technology with low pressure drop.
• Zero waste of compressed air thanks to no-loss condensate drain.
• Reduced operating costs.
• Environmentally-friendly characteristics; zero ozone depletion.
• Global warming potential has been lowered significantly by an average of 50% by reducing the amount of refrigerant in the new dryer.

Meet your specific requirements
Thanks to its integrated dryer, the Atlas Copco GA 75-110 VSD+ offers the right air quality for your application.

Compressed air purity classification ISO 8573-1:2010

<table>
<thead>
<tr>
<th>Purity class</th>
<th>Solid particles</th>
<th>Water</th>
<th>Total oil*</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Number of particles per m³</td>
<td>Pressure dewpoint</td>
<td>Concentration</td>
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<tr>
<td></td>
<td>0.1&lt;d&lt;0.5 μm</td>
<td>0.5&lt;d&lt;1.0 μm</td>
<td>1.0&lt;d&lt;5.0 μm</td>
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<tr>
<td>0</td>
<td>As specified by the equipment user or supplier and more stringent than Class 1</td>
<td>≤ 58</td>
<td>≤ 10</td>
</tr>
<tr>
<td>1</td>
<td>≤ 20000</td>
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<td>≤ 8</td>
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<td>6</td>
<td>≤ 5 mg/m³</td>
<td>≤ 10</td>
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* Liquid, aerosol and vapor.
** d= diameter of the particle.
**TECHNICAL SPECIFICATIONS GA 75-110 VSD+**

<table>
<thead>
<tr>
<th>Type</th>
<th>Working pressure</th>
<th>Capacity FAD* (min-max)</th>
<th>Installed motor power</th>
<th>Noise level**</th>
<th>Weight WorkPlace</th>
<th>Weight Full Feature</th>
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<tbody>
<tr>
<td></td>
<td>bar(e)</td>
<td>m³/hr</td>
<td>l/s</td>
<td>psig</td>
<td>kW</td>
<td>hp</td>
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<td>75</td>
<td>100</td>
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<td>181</td>
<td>71</td>
<td>254</td>
<td>110</td>
<td>150</td>
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</tbody>
</table>


** Mean noise level measured at a distance of 1 m at max. working pressure according to ISO 2151: 2004 using ISO 9614/2 (sound intensity method); 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 effective working pressures:
- 4 bar(e)
- 7 bar(e)
- 9.5 bar(e)
- 12.5 bar(e)

Maximum working pressure: 13 bar(e) (188 psig).

### Options

- Energy recovery
- Pre-filter
- Tropical thermostat
- Food Grade oil
- UD+ filter
- RXD oil
- ES4i, ES6i
- Transformer sales kit 200-230V/500-575V
- High ambient version
- Power duct fan

### Flow Chart GA 75-110 VSD+

**DIMENSIONS**

<table>
<thead>
<tr>
<th></th>
<th>Standard</th>
<th>Full Feature</th>
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<tbody>
<tr>
<td></td>
<td>D (mm)</td>
<td>W (mm)</td>
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<tr>
<td>GA 75-110 VSD+</td>
<td>1400</td>
<td>1300</td>
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</tbody>
</table>

### After cooler
- Condenser
- Dry compressed air
- Intake air
- Oil cooler
- Air/oil mixture
- Oil

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10 - Atlas Copco GA 75-110 VSD+ oil-injected rotary screw compressors
COMMITTED TO SUSTAINABLE PRODUCTIVITY

We stand by our responsibilities towards our customers, towards the environment and the people around us. We make performance stand the test of time. This is what we call – Sustainable Productivity.