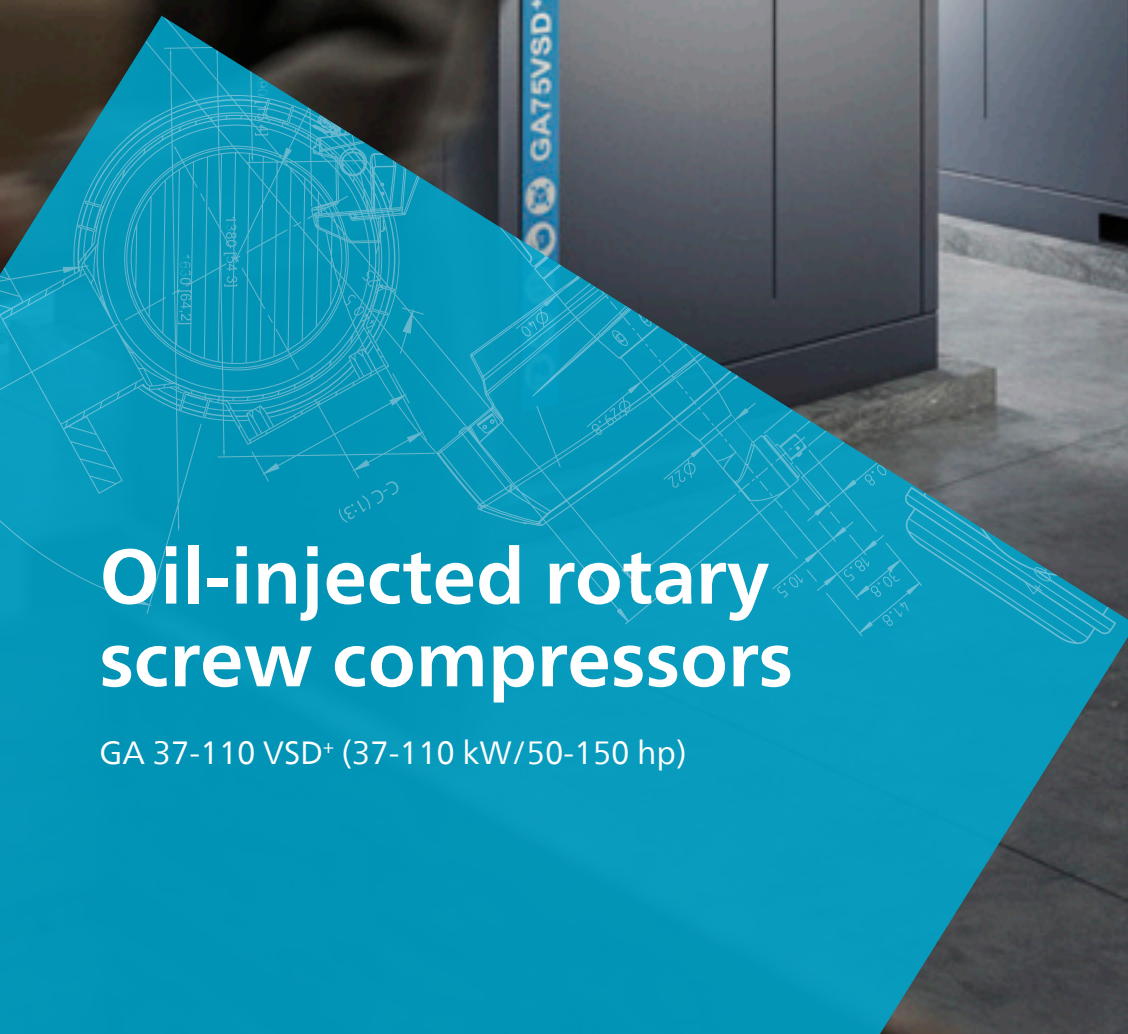




Atlas Copco



Oil-injected rotary screw compressors

GA 37-110 VSD+ (37-110 kW/50-150 hp)



GA90VSD⁺

The new revolutionary compressor from Atlas Copco

Atlas Copco's GA 37-110 VSD⁺ is not just a ground-breaking new compressor range, it is an operational transformation. It reduces your energy costs by 50% on average and maximizes uptime, even in the harshest conditions. Driving this next-level performance: Atlas Copco's Variable Speed Drive, a powerful interior permanent magnet motor, and our in-house developed Neos inverter. Thanks to its compact vertical design, the GA 37-110 VSD⁺ fits in even the smallest compressor room. Including yours? Discover how the GA 37-110 VSD⁺ can transform your operational environment today.



Innovative

Atlas Copco has revolutionized compressor build and performance. Instead of the normal space-taking horizontal design, the new GA 37-110 VSD+ has an upright, compact layout. This saves valuable floor and work space, eases maintenance access, and reduces the total cost of ownership for all customers.

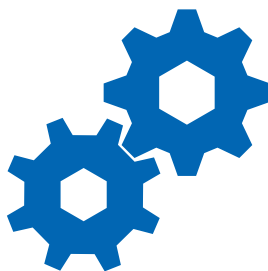
Efficient

- Reduced energy consumption by 50% on average compared to the current idling models.
- Free Air Delivery (FAD) increase of up to 12%.

IE5

Meeting and exceeding efficiency benchmarks:

- The iPM motor of the GA 37-110 VSD+ equals IE5 standards.
- The Neos inverter and iPM motor exceed IES2 (EN 50598) requirements for power drive efficiency.



Reliable

- Our Neos inverter, developed in-house to maximize compressor reliability, is built to provide extra protection against dust and other particles.
- Completely enclosed frequency drive and drive train ensure performance even in the harshest environments.
- Based on the 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® Touch controller.
- Maintenance notifications and machine status are available via SMARTLINK e-mail or text messages.
- Customized reports on the energy performance of your machine, in compliance with ISO 50001.



Inside the robust GA 37L-75 VSD⁺



IE5

Meeting and exceeding efficiency benchmarks:

- The iPM motor of the GA 37L-75 VSD⁺ equals IE5 standards.
- Neos inverter and iPM motor exceed IE2 (EN 50598) requirements for power drive efficiency.

1

Interior Permanent Magnet (iPM) motor

- Oil-cooled motor.
- Optimal cooling for all speeds and ambient conditions.
- Designed in-house in Belgium.
- Oil-lubricated motor bearing: no (re)grease(ing), increased uptime.
- IP66: pressure tight.
- Permanent magnets.

2

New compressor element

- New improved rotor profile.
- Reduced pressure losses.
- Optimized in and outlet portals.

3

Direct drive

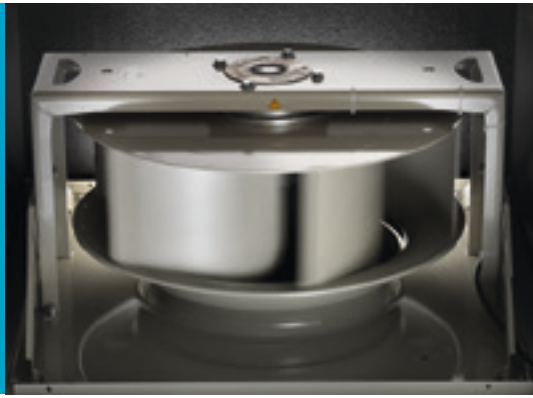
- Vertical design, less parts.
- Oil-cooled, pressure-tight.
- No gears or belts, no shaft seal.

4

Inlet filter

- Heavy duty.
- Maintenance every 4,000 hours.
- Pressure drop indicator.





5

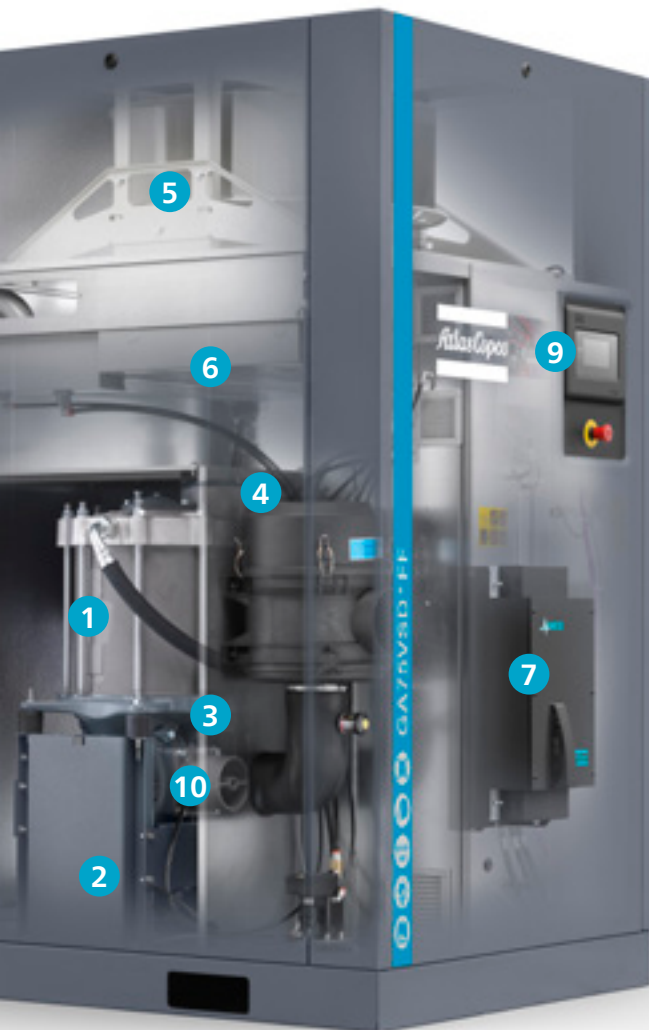
Radial fan

- Compact.
- Low noise level.
- High capacity for optimized cooling.

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

- Extra compact footprint.
- Refrigerant R410A.

9

Elektronik® Touch controller

- High-tech controller with warning indications, compressor shut-down and maintenance scheduling.
- Easy to use and designed to perform in the toughest conditions.
- Standard SMARTLINK remote monitoring to maximize air system performance and energy savings.
- Optional multiple compressor control (2, 4 or 6 compressors).



11

VSD+ Neos cubicle

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

10

Sentinel valve

- Optimizes the inlet flow of the air end.
- No blow-off losses.
- Full aluminum design: maintenance-free.

Inside the powerful GA 75L-110 VSD⁺

IE5

Meeting and exceeding efficiency benchmarks:

- The iPM motor of the GA 75L-110 VSD⁺ equals IE5 standards.
- Neos inverter and iPM motor exceed IES2 (EN 50598) requirements for power drive efficiency.

2

New compressor element

- Improved efficiency.
- Made by Atlas Copco.
- Robust and silent.

1

Interior Permanent Magnet (iPM) motor

- Compact, customized design for optimal cooling by oil.
- Designed in-house in Belgium.
- IP66 protection rating.
- No cooling air flow required.
- Oil-lubricated motor bearing: no (re)grease(ing) and increased uptime.

3

Direct drive

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

4

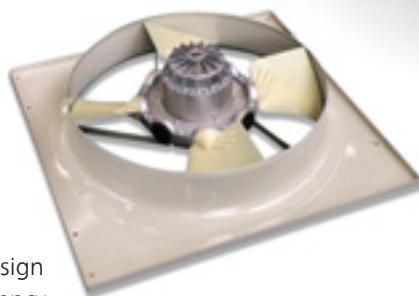
Inlet filter

- Heavy duty.
- Pressure drop indicator.
- Maintenance every 4,000 hours.

5

Cooling fan

- Already compliant with future ERP2020 efficiency.
- Optimized, application-specific design results in low noise and high efficiency.
- Condensation prevention cycle based on inlet humidity sensor.

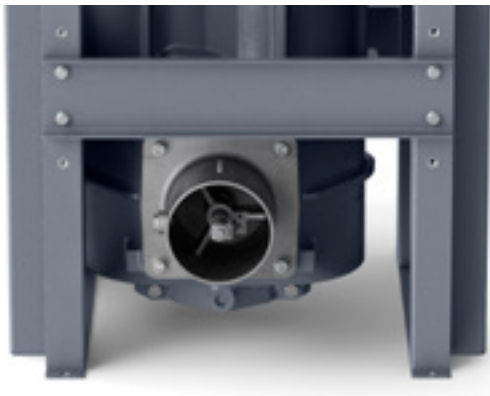


6

Classic cooler design

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





7 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.



10 VSD+ Neos cubicle

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

8 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.

9 Elektronikon® Touch controller

- High-tech controller with warning indications, compressor shut-down and maintenance scheduling.
- Easy to use and designed to perform in the toughest conditions.
- Standard SMARTLINK remote monitoring to maximize air system performance and energy savings.
- Optional multiple compressor control (2, 4 or 6 compressors).





VSD+ for 50% average energy savings

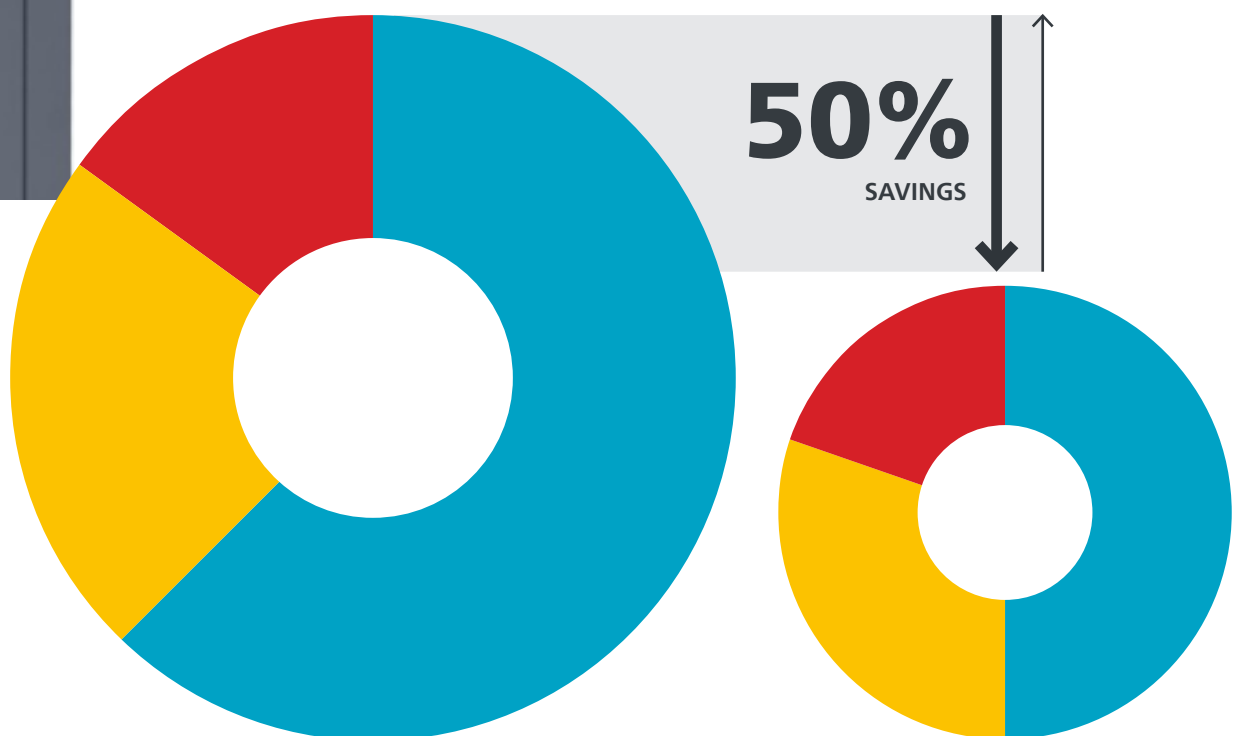
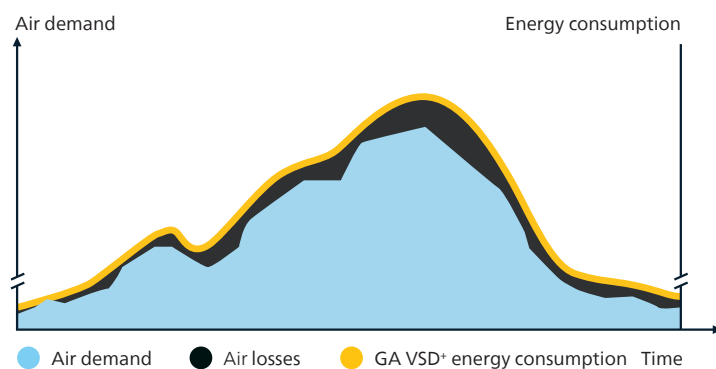
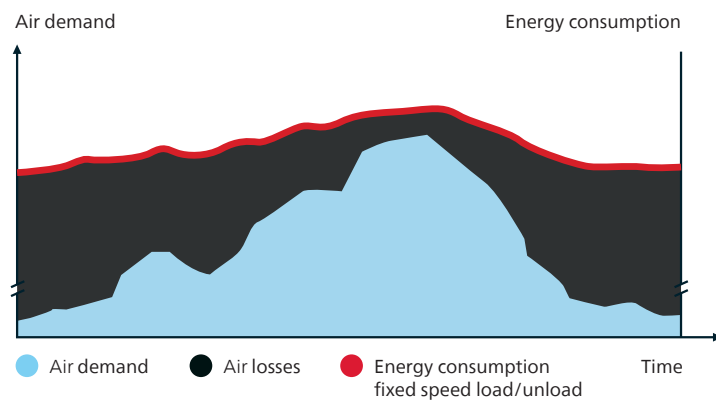
Atlas Copco's GA Variable Speed Drive+ (VSD+) technology closely matches the air demand by automatically adjusting the motor speed. Combined with the innovative design of the iPM (Permanent Magnet) motor, this results in average energy savings of 50% and an average reduction of 37% in the lifecycle cost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

Why Atlas Copco Variable Speed Drive+ technology?

- On average 50% energy savings with an extensive flow range (20-100%).
- Integrated Elektronikon® Touch 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.
- Eliminates peak current penalty during start-up.
- Minimizes system leakage due to a lower system pressure.
- EMC compliance to directives (2004/108/EG).

* Compared to fixed speed compressors, based on measurement performed by an independent energy audit agency.

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.



GA Fixed Speed

GA VSD+

● Investment ● Energy ● Maintenance

Advanced monitoring, control & connectivity

Whether you call it Industry 4.0 or the Internet of Things (IoT), interconnectivity is the future. The GA 37-110 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 settings to reduce energy use and costs during fluctuating demand.

Integrated Saver Cycles

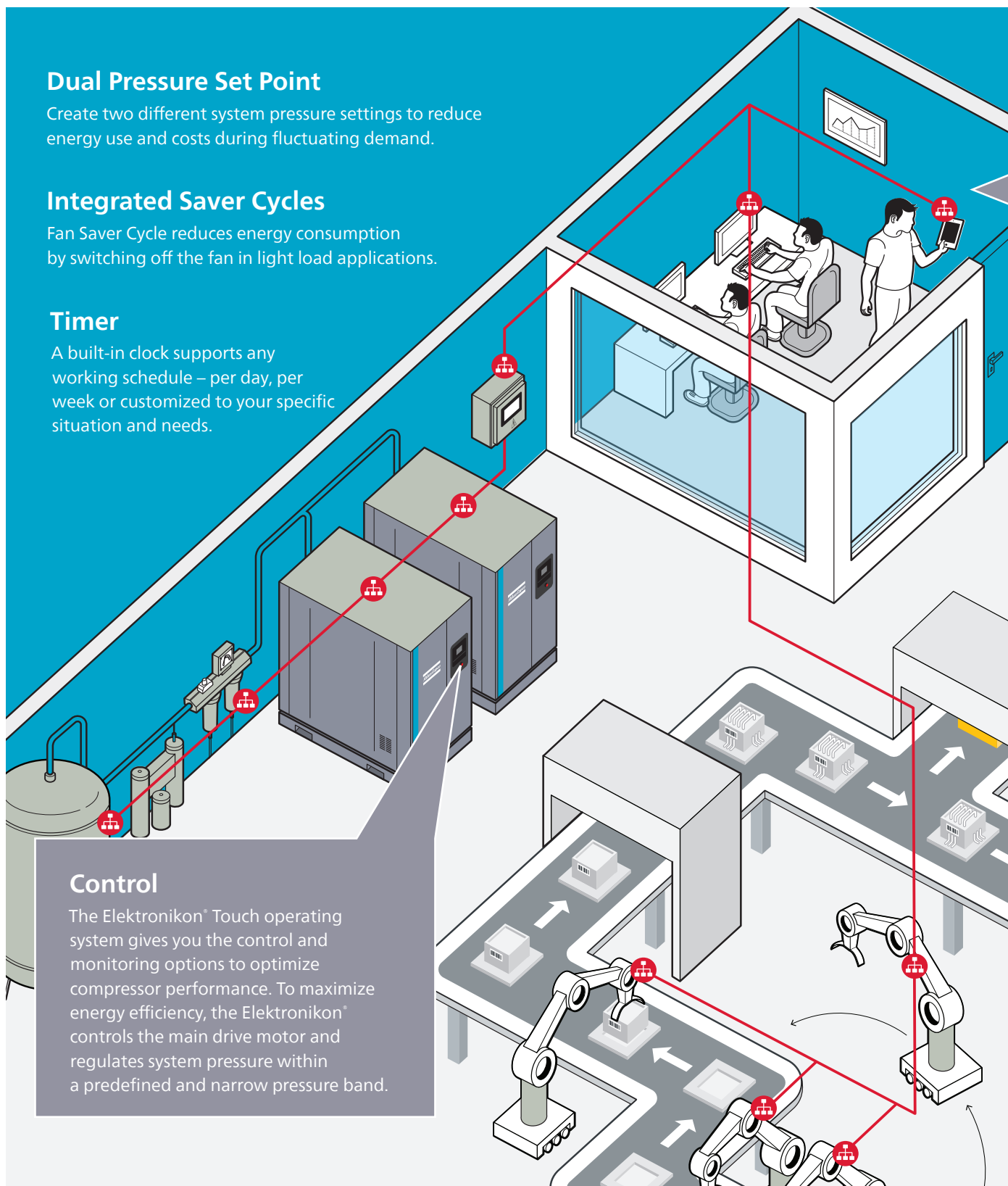
Fan Saver Cycle reduces energy consumption by switching off the fan in light load applications.

Timer

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

Control

The Elektronikon[®] Touch operating system gives you the control and monitoring options to optimize compressor performance. To maximize energy efficiency, the Elektronikon[®] controls the main drive motor and regulates system pressure within a predefined and narrow pressure band.



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 upfront.

* Please contact your local sales representative for more information.

State-of-the-art Elektronikon® Touch controller



- ✓ Improved user-friendliness: 4.3-inch high-definition color display with clear pictograms and service indicator.
- ✓ Built-in SMARTLINK online monitoring.
- ✓ Increased reliability: new, user-friendly, multilingual user interface and durable touch screen.

Key features:

- Automatic restart after voltage failure.
- Internet-based compressor visualization using a simple Ethernet connection.
- Dual Pressure Set Point.
- 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 service plan indication.
- Remote control and connectivity functions.
- Control up to 6 compressors by installing the optional equalizer central controller software.

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 37-110 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 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 37-110 VSD⁺ offers the right air quality for your application.

Compressed air purity classification ISO 8573-1:2010

Purity class	Solid particles			Water		Total oil*
	Number of particles per m ³			Pressure dewpoint		Concentration
	0.1 < d ≤ 0.5 μm**	0.5 < d ≤ 1.0 μm**	1.0 < d ≤ 5.0 μm**	°C	°F	mg/m ³
0	As specified by the equipment user or supplier and more stringent than Class 1.					
1	≤ 20000	≤ 400	≤ 10	≤ -70	≤ -94	≤ 0.01
2	≤ 400000	≤ 6000	≤ 100	≤ -40	≤ -40	≤ 0.1
3	-	≤ 90000	≤ 1000	≤ -20	≤ -4	≤ 1
4	-	-	≤ 10000	≤ 3	≤ 37.4	≤ 5
5	-	-	≤ 100000	≤ 7	≤ 44.6	-
6	≤ 5 mg/m ³			≤ 10	≤ 50	-

* Liquid, aerosol and vapor.

** d= diameter of the particle.



Always at your service

Care for your compressed air

Compressed air is a vital part of your production process. However, keeping your air system running perfectly should not require too much of your time or attention. Leave it to the Atlas Copco service experts! We are here to help you with installation and commissioning, and the maintenance that best fits your needs. From the timely supply of service parts to taking full responsibility of your compressed air installation, we can ensure the reliable performance, maximum uptime and optimal efficiency you need.

The value of service

As a world player in compressed air solutions, we know how to best maintain and optimize your system. Our expert service technicians are highly trained in the smallest details of your installation as well as its overall performance. To protect your investment and ensure the integrity of your air system, they use genuine Atlas Copco spare parts only. Atlas Copco parts are delivered on-time, anywhere on the planet, through our world-class logistics organization.

Our monitoring capabilities enable us to spot issues before they become problems. Along with our customized audits, they offer insights in how to optimize your efficiency and reduce costs.

Call your service partner

We have more than 4,000 service engineers in over 160 countries. You are sure to find one just around the corner. Don't wait to discover the real value of our service offer: having your compressed air installation running optimally and efficiently, without interruptions and at minimal cost. Contact us today!

Technical specifications GA 37-110 VSD+

Compressor type	Max. working pressure		Capacity FAD* (min-max)			Installed motor power		Noise level**	Weight WorkPlace	Weight WorkPlace Full Feature
	bar(e)	psig	l/s	m³/h	cfm	kW	hp	dB(A)	kg	kg
GA 37 VSD+***	4	58	15-116	55-419	32-246	37	50	67	376	500
	7	102	15-115	53-413	31-243	37	50	67	376	500
	9.5	138	17-102	62-368	36-216	37	50	67	376	500
	12.5	181	16-87	59-312	35-183	37	50	67	376	500
GA 37L VSD+	4	58	26-133	94-479	55-282	37	50	67	860	1060
	7	102	26-132	93-475	55-279	37	50	67	860	1060
	9.5	138	25-116	89-418	53-246	37	50	67	860	1060
	12.5	181	38-99	138-355	81-209	37	50	67	860	1060
GA 45 VSD+	4	58	26-159	94-573	55-337	45	60	67	860	1060
	7	102	26-157	93-565	55-332	45	60	67	860	1060
	9.5	138	25-137	89-494	53-291	45	60	67	860	1060
	12.5	181	38-115	138-359	81-211	45	60	67	860	1060
GA 55 VSD+	4	58	26-189	93-680	55-400	55	75	67	900	1100
	7	102	26-188	94-677	55-399	55	75	67	900	1100
	9.5	138	26-166	93-598	55-352	55	75	67	900	1100
	12.5	181	40-140	145-504	85-297	55	75	67	900	1100
GA 75 VSD+	4	58	26-226	93-815	55-480	75	100	70	920	1120
	7	102	27-225	97-809	57-476	75	100	70	920	1120
	9.5	138	27-198	96-712	57-419	75	100	70	920	1120
	12.5	181	42-167	150-600	88-353	75	100	70	920	1120
GA 75L VSD+	4	58	47-269	169-967	100-569	75	100	73	1207	1496
	7	102	48-266	172-957	101-563	75	100	73	1207	1496
	9.5	138	58-235	210-847	124-498	75	100	73	1207	1496
	12.5	181	70-194	252-699	149-411	75	100	73	1207	1496
GA 90 VSD+	4	58	48-311	174-1121	102-660	90	125	74	1213	1503
	7	102	49-306	176-1101	104-648	90	125	74	1213	1503
	9.5	138	60-269	215-969	127-570	90	125	74	1213	1503
	12.5	181	71-218	255-784	150-461	90	125	74	1213	1503
GA 110 VSD+	4	58	47-348	170-1251	100-736	110	150	76	1222	1573
	7	102	49-345	175-1241	103-731	110	150	76	1222	1573
	9.5	138	59-309	211-1111	124-654	110	150	76	1222	1573
	12.5	181	71-268	254-965	150-568	110	150	76	1222	1573

* Unit performance measured according ISO 1217 ed. 4 2009, annex E, latest edition.

** 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).

*** This model is part of the GA 7-37 VSD+ range, a different series with different specifications.

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)

Reference conditions:

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

Options

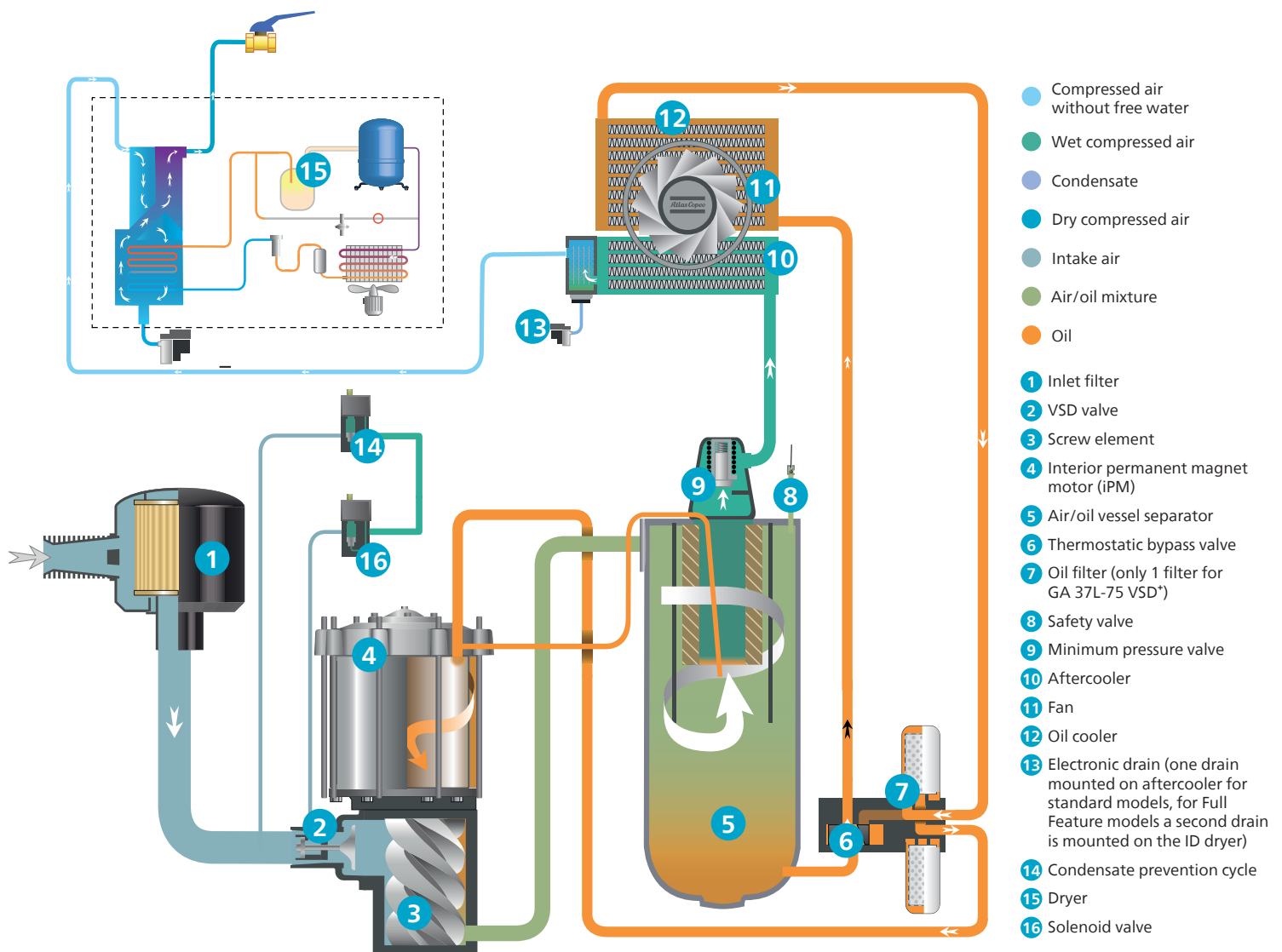
Energy recovery
Water-cooled version
High ambient version
IT ancillaries
Elektronikon® controller expansion module
Pre-filter
Tropical thermostat
Powerduct fan
UD* filter
FoodGrade oil
Roto Synthetic Xtend oil
EQ2i, EQ4i, EQ6i

Transformer included for 200-230-575V units



Dimensions	Standard						Full Feature					
	D (mm)	W (mm)	H (mm)	D (in)	W (in)	H (in)	D (mm)	W (mm)	H (mm)	D (in)	W (in)	H (in)
GA 37 VSD+	780	811	1590	30.71	31.93	62.60	780	1273	1590	30.71	50.12	62.6
GA 37L-75 VSD+	1100	1153	1968	43.31	45.39	77.48	1100	1656	1968	43.31	65.20	77.48
GA 75L-110 VSD+	1400	1300	1968	55.12	51.18	77.48	2178	1300	1968	85.75	51.18	77.48

Flow chart GA 37L-110 VSD+

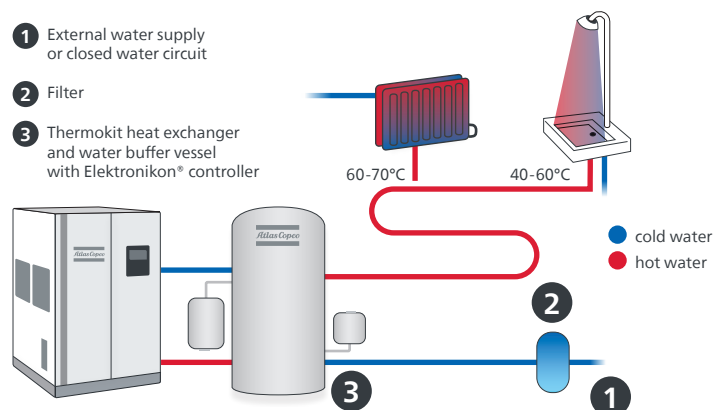


Recover and save energy

As much as 90% of the electrical energy used by a compressed air system is converted into heat. Using Atlas Copco's integrated energy recovery systems, you can recover up to $\approx 75\%$ of that power input as hot air or hot water without any adverse influence on the compressor's performance. Through efficient usage of the recovered energy, you generate important energy cost savings and a high return on investment.

Applications

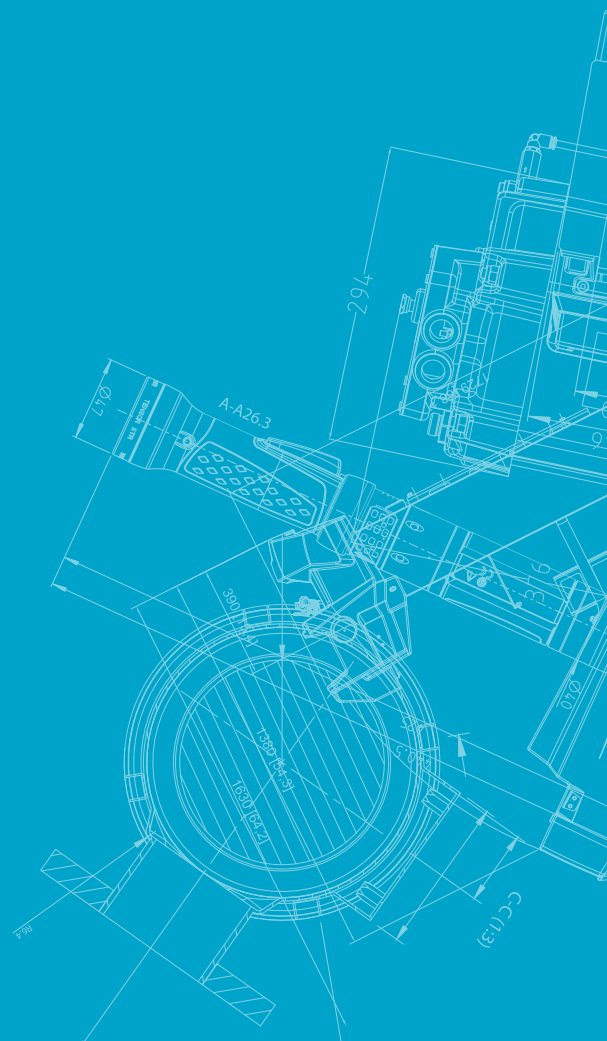
- Auxiliary or main heating of warehouses, workshops...
- Industrial process heating.
- Water heating for laundries, industrial cleaning and sanitary facilities.
- Canteens and large kitchens.
- Food industry.
- Chemical and pharmaceutical industries.
- Drying processes.





Atlas Copco

atlascopco.com



Oil-injected rotary screw compressors

GA 90+ – 160 (VSD+)

Atlas Copco





Highest reliability, lowest operating costs

The shortest route to maximize your profitability is to minimize your operational costs. With up to 80% of a compressor lifecycle cost coming from the energy it consumes, this should be a clear focus. Atlas Copco's GA compressors with SmartInjection enabled compression elements and IE4 or better class motors are designed to achieve significant energy savings while providing long and trouble-free life even in the harshest environmental conditions.

Efficiency

At the heart of the GA compressors are state-of-the-art compression elements with SmartInjection technology and high efficiency oil cooled IE4 or better class motors. This highly efficient drive train coupled with generous cooling capacity, low internal pressure drops and precise control from the Elektronikon® Touch ensures optimum efficiency.

Reliability

The GA compressor's drive train is IP66 rated protecting it completely from environmental dust and moisture ensuring it can operate reliably in the toughest conditions and at ambient temperatures up to 55°C/131°F.

Serviceability

Service time is reduced to a minimum with all service parts grouped together for ease of access and, if greater access is required, the patented portal design enables full access to all components. Each component has also been designed for serviceability, halving the time required to service compared to traditional designs.



Installations around the world

Thousands of GA compressors are running around the world in a vast range of applications delivering reliable and efficient compressed air.



General industry

Lowest life cycle cost

For industrial companies compressed air is essential in their daily operations that include pneumatic tools for cutting, drilling, hammering and grinding; pneumatic actuators and valves; ventilation systems; packing and palletizing machinery and many more. GA compressors are designed for lowest lifecycle cost.

Mining

Operating in the toughest conditions

Compressed air is vital for the mining industry. Uses include dust bag filtration, service air, ventilation air and powering pneumatic tools. The reliability and robustness of GA compressors will accomplish the job even in the harshest conditions.





Power plants

Reliable and dependable

Power plants run round-the-clock to supply vital energy with a continuous supply of compressed air, critical for trouble-free operation. GA compressors provide a reliable source of compressed air for applications such as soot blowing and fly ash handling.

Metal plants

Ultimate efficiency

Metal plants use compressed air for instrumentation, plant air and pneumatic conveying of raw materials or ash. Metal plants are in need of an efficient solution to reduce their operating costs and to meet environmental targets. Our GA air compressors are designed to meet this demand.



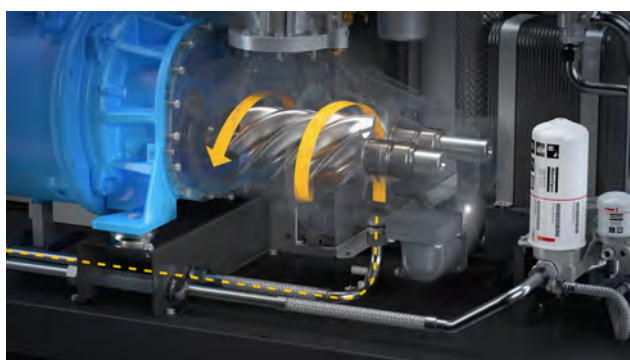
Cement industry

Easy to maintain and service

Cement works are one of the biggest consumers for compressed air with the vast majority of air used for transporting raw materials within the factory. If moisture, dust, or other contaminants are present in the environment it can impair compressor performance, resulting in excess energy consumption and maintenance costs. GA compressor not only have an IP66 rated drive train that prevents contaminants from entering the compressor, they are also easy to maintain and service with a grouped service area and slide out coolers.

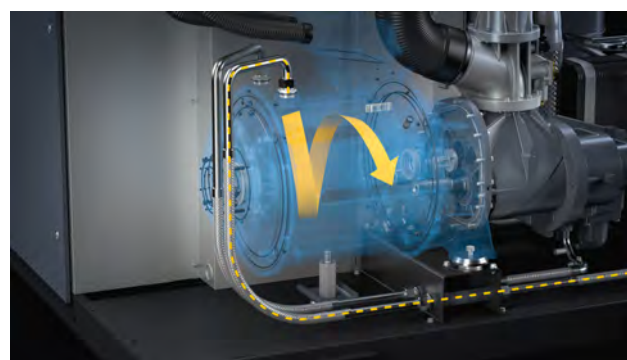


GA air-cooled fixed speed pack



Always operates reliably and at peak efficiency

- SmartInjection provides exact amount of oil required to element ensuring it always works at peak efficiency in different conditions.
- Separate oil flow to bearings for longer life and greater uptime.



High efficiency IE4 motor

- Oil cooled motors require no service interventions.
- IP66 rated for increased reliability even in tough environments.

GA water-cooled fixed speed FF



Reduced service time for greater uptime

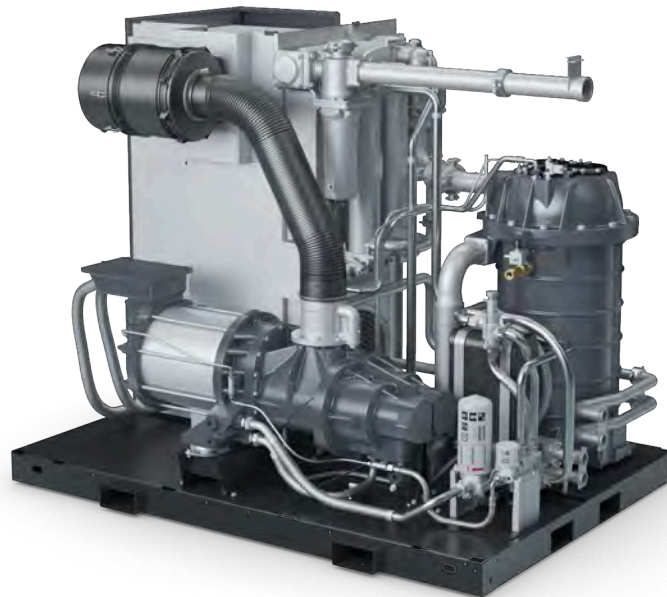
- Multiple smaller cartridges simplify and reduce service times and minimize oil carry over.



Ready-to-use compact package

- The GA Full Feature comes with an integrated dryer.
- Guaranteed dew point of 3°C/37°F.
- No additional installation work of wires and pipes.
- Reduced power consumption due to unique and patented Save Cycle Control stops the dryer when the compressor is stopped or in unload mode.
- Continuously monitored dew point.

GA water-cooled VSD pack



Ease of maintenance

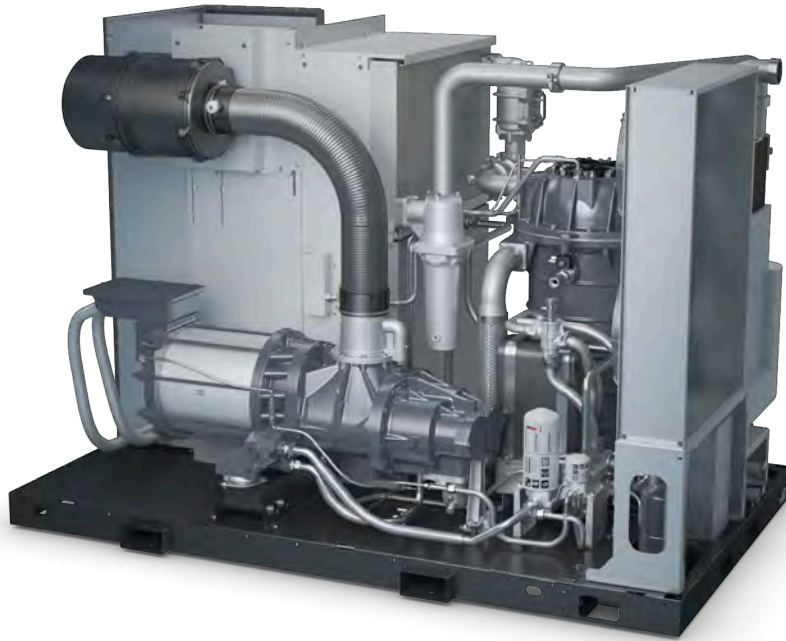
- Minimal service times with service parts grouped together for ease of access.
- Portal design enables full access to all components.
- All components are designed for serviceability.



Up to 78% of energy recovered as hot water

- Optional integrated energy recovery system.
- Up to 78% energy recovered from integrated motor and element oil circuit.

GA air-cooled VSD FF



Operate at temperatures up to 46°C (115°F) as standard

- VSD fan delivers energy efficiency in lower temperatures.



High efficiency IE5 Permanent Magnet motor

- No need for external cooling because of oil cooled motors.
- Increased reliability and fewer service interventions.
- IP66 rated motor.

VSD: driving down energy costs

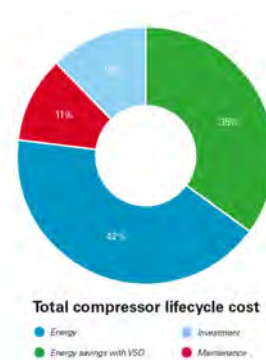
Variable Speed Drive

Driving down 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.

Energy savings 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.



What is unique about the integrated Atlas Copco VSD?

1. The Elektronikon® controls both the compressor and the integrated converter, ensuring maximum machine safety within parameters.
2. Flexible pressure selection with VSD 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 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. A highly efficient frequency converter in a 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 70-75%.
9. Net pressure band is maintained within 0.10 bar, 1.5 psi.

Monitoring and control

How to get the most from the least

Elektronikon® MK5 Touch

The Elektronikon® unit controller is specially designed to maximize the performance of your compressors and air treatment equipment under a variety of conditions. Our solutions provide you with key benefits such as increased energy efficiency, lower energy consumption, reduced maintenance times and less stress... less stress for both you and your entire air system.



Intelligence is part of the package

The full color touch display gives you an easy to understand readout of the equipment's running conditions.

- Clear icons and intuitive navigation provides you fast access to all of the important settings and data.
- Monitoring of the equipment running conditions and maintenance status; bringing this information to your attention when needed.
- Operation of the equipment to deliver specifically and reliably to your compressed air needs.
- Built in remote control and notifications functions provided as standard, including simple to use integrated webpage.
- Integrated **SMARTLINK**
- Support for 31 different languages, including character based languages.

Online & mobile monitoring

Monitor your machines over the ethernet with the Elektronikon® unit controller and the **SMARTLINK** service. Monitoring features include warning indications, compressor shut-down, sensor trending and maintenance scheduling.



Dual set-point and automatic stop

Most production processes create fluctuating levels of demand which, in turn, can create energy waste in low use periods. Using the Elektronikon® unit controller, you can manually or automatically switch between two different setpoints to optimize energy use and reduce costs at low use times. In addition, the sophisticated algorithm runs the drive motor only when needed. As the desired setpoint is maintained while the drive motor's run time is minimized, energy consumption is kept to a minimum.

SMARTLINK

Monitor your compressed air installation with SMARTLINK

Knowing the status of your compressed air equipment at all times is the surest way to achieve optimal efficiency and maximum availability.

Go for energy efficiency

Customized reports on the energy efficiency of your compressor room.

Increase uptime

All components are replaced on time, ensuring maximum uptime.

Save money

Early warnings avoid breakdowns and production loss.



Optimize your compressed air system

Minimizing Excess Pressure

Optimizer 4.0 minimizes the generation of excess compressed air by starting and stopping compressors. Its user friendly interface enables you to set multiple pressure bands, allowing you to optimize your compressor installation for varying circumstances, such as non-productive hours.

Full VSD Benefits

With Optimizer 4.0 you can realize the full energy saving potential of VSD (Variable Speed Drive). It regulates the VSD to ensure that the compressed air output is proportional to the demand, preventing higher pressures than required, excess unloaded running, and spiraling energy costs.

Improving Uptime

Optimizer 4.0 effectively eliminates production downtime caused by unexpected system pressure drops, because it regulates the system pressure instead of the compressor output pressure.

This means Optimizer 4.0 will automatically adjust the system pressure to compensate for pressure drops due to filters, piping and dryers for example.

We also provide additional functionality and services on Optimizer 4.0 to ensure that your energy savings will stand the test of time. Even when your installation needs adaptations or your demand changes.



Services

Properly caring for your air compressor helps you lower your operating costs and minimises the risk for unplanned breakdowns or production stops. Atlas Copco offers energy efficiency checks, service, repairs, spare parts and maintenance plans for all air compressors. Entrust your servicing to our expert professionals and ensure your business continues to run efficiently. Our plans cover repairs, preventative maintenance, spare parts, and more.

Compressor oils, lubricants and fluids

Every type of compressor and vacuum pump needs a specific oil to achieve maximum uptime, performance and lifetime. Our compressed air fluids and lubricants cover all your needs.

Unique mix of additives

Tailored to the specific needs of your equipment.

Anti-oxidation

The high-quality oil ensures maximum protection.

Prevent foaming

Anti-foaming improves your air quality.



Genuine Atlas Copco oils

Maximize your resources with a Service Plan

Reduce your total cost of ownership and benefit from optimal performance

Save costs

Optimal maintenance will reduce the operational cost of your compressed air and vacuum system.

Increase operational efficiency

Our maintenance expertise makes life easier when it comes to resource management.

High uptime and performance

Specialist service keeps your equipment running as it should, protecting your investment.



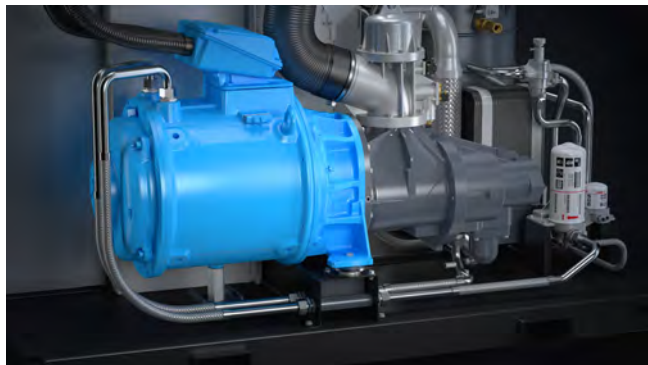
Customized to your needs

A range of optional features are available to ensure the GA compressor is customized to the applications requirements

High ambient temperature variant

Reliable and continuous operation of the compressor in hot and humid environments up to :

- max. 55°C (131°F) for fixed speed pack
- max. 50°C (121°F) for VSD pack



Shock pulse monitoring

Continuous SPM “Shock Pulse Measurement” monitoring system of the compressor element & motor bearings. The sensors are connected to the Elektronikon® which is showing the individual vibration levels.

Alarm and/or shutdown levels can be programmed during commissioning of the compressor. With this monitoring system, the compressor can run longer, since overhaul can be done when needed and preventive maintenance can be organized.

Energy recovery

The energy recovery system consists of a build-in stainless steel heat exchanger and thermostatic controlled system to recover the heat from the compressor in the form of warm water or hot water without any adverse influence on the compressor performance.





Witness and performance test

Factory visit and witnessing of the standard performance test of the compressor. The compressor is tested following the Atlas Copco standard test procedure in accordance to the ISO 1217: 2009, annex "C" and "E" (4th edition) for full transparency and peace of mind.



Food grade oil

The option "Roto-Foodgrade oil" allows you to operate the compressor in industries like packaging, pharmaceutical and food and beverage industry, where occasional contact is allowed in and around food processing areas.



Integrated dryer

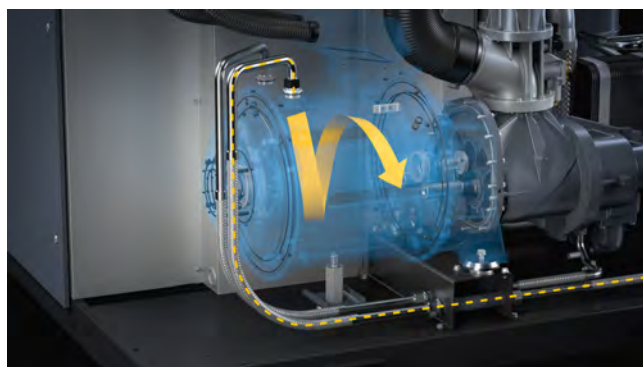
In a GA Full Feature compressor the refrigeration dryer is fully integrated in the compressor unit. This "all-in-one" feature not only reduces the space requirement for installing the compressor but also provides savings on piping installation cost.

Typical dew point of a refrigerant dryer is +3°C (37.4°F) at reference conditions.

Motor thermal protection

Five (PT-1000) temperature sensors are installed in the main motor of which 2 sensors are monitoring the bearings and 3 sensors are monitoring the windings.

The relevant temperatures are shown on the Elektronikon® display and alarms and shutdowns are programmed to protect the compressor motor.



Process flow, oil flow and cooling flow - step by step

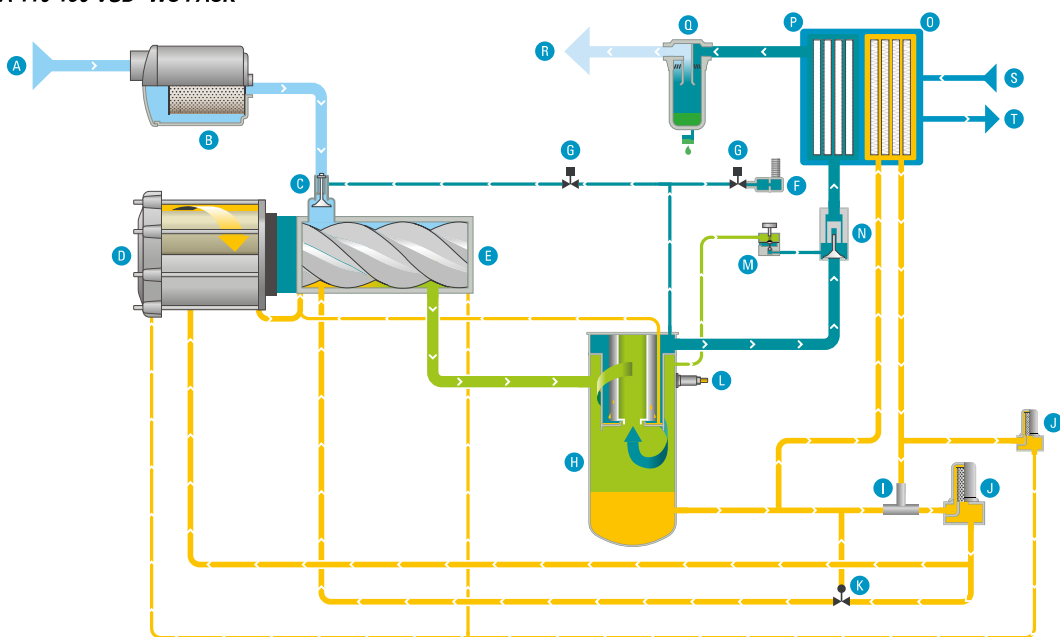
- A** Air inlet
- B** Intake filter
- C** Air intake valve
- D** Motor
- E** Compression element
- F** Blow-off silencer
- G** Solenoid valve
- H** Air/oil separator vessel
- I** Thermostatic bypass valve
- J** Oil filter
- K** Thermostatic valve
- L** Safety valve
- M** Pressure regulator
- N** Minimum pressure valve
- O** Oil cooler
- P** After cooler
- Q** Water separator
- R** Air out
- ☐ Dry compressed air
- ☒ Air
- ☐ Oil
- ☐ Oil/air mixture
- ☐ Wet compressed air
- ☐ Condensate

The diagram illustrates the layout of a wastewater treatment plant (GA 110-160 VSD+ AC FF). It features several key components and their interconnections:

- Input and Initial Treatment:** Wastewater enters through a blue pipe (A) into a pump (B). It then flows into a large cylindrical tank (D) equipped with a screw conveyor (E) for sludge collection.
- Sludge Handling:** Sludge is collected in a hopper (L) and then transported via a yellow pipe to a storage tank (H) at the bottom. A yellow pipe (I) also leads from the hopper to a sludge pump (J).
- Aeration and Air Supply:** Air is supplied from a tank (R) through a valve (X) to an aeration system (V). The aeration system is connected to a yellow pipe (Y) that leads to a pump (P) and a fan (O). A yellow pipe (U) also connects the aeration system to a tank (T).
- Flow Control and Distribution:** Various valves (G, K, M, N, Q, S, W) and pumps (F, J) are used to control the flow of wastewater and sludge throughout the system. A yellow pipe (C) connects the screw conveyor (E) to the aeration system (V).
- Final Discharge:** The treated effluent is discharged through a blue pipe (A) into a body of water.

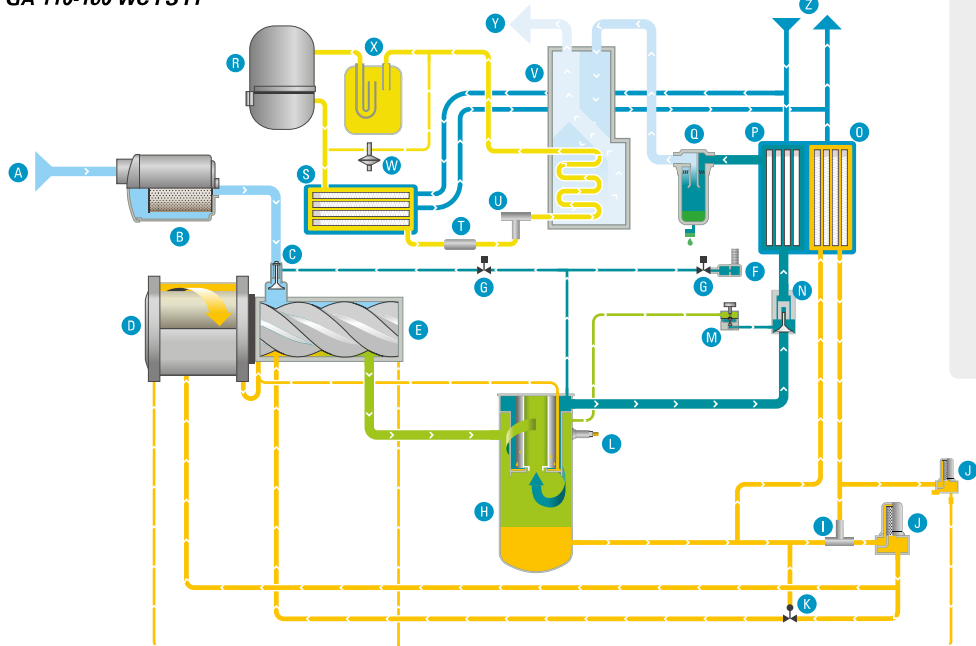
- | | |
|------------------------------------|--|
| A Air inlet | K Thermostatic valve |
| B Intake filter | L Safety valve |
| C Air intake valve | M Pressure regulator |
| D Motor | N Minimum pressure valve |
| E Compression element | O Oil cooler |
| F Blow-off silencer | P After cooler |
| G Solenoid valve | Q Water separator |
| H Air/oil separator vessel | R Refrigerant compressor |
| I Thermostatic bypass valve | S Condenser |
| J Oil filter | T Liquid refrigerant dryer/filter |
| | U Thermostatic expansion valve |
| | V Dryer heat exchanger |
| | W Hot gas bypass valve |
| | X Accumulator |
| | Y Air out |
| |  Dry compressed air |
| |  Air |
| |  Oil |
| |  Oil/air mixture |
| |  Wet compressed air |
| |  Refrigerant |
| |  Condensate |

GA 110-160 VSD⁺ WC PACK



- A Air inlet
- B Intake filter
- C Air intake valve
- D Motor
- E Compression element
- F Blow-off silencer
- G Solenoid valve
- H Air/oil separator vessel
- I Thermostatic bypass valve
- J Oil filter
- K Thermostatic valve
- L Safety valve
- M Pressure regulator
- N Minimum pressure valve
- O Oil cooler
- P After cooler
- Q Water separator
- R Air out
- S Cooling water inlet
- T Cooling water outlet
- U Dry compressed air
- V Air
- W Oil
- X Oil/air mixture
- Y Wet compressed air
- Z Condensate
- AA Cooling water

GA 110-160 WC FS FF



- A Air inlet
- B Intake filter
- C Air intake valve
- D Motor
- E Compression element
- F Blow-off silencer
- G Solenoid valve
- H Air/oil separator vessel
- I Thermostatic bypass valve
- J Oil filter
- K Thermostatic valve
- L Safety valve
- M Pressure regulator
- N Minimum pressure valve
- O Oil cooler
- P After cooler
- Q Water separator
- R Refrigerant compressor
- S Condenser
- T Liquid refrigerant dryer/filter
- U Thermostatic expansion valve
- V Dryer heat exchanger
- W Hot gas bypass valve
- X Accumulator
- Y Air out
- Z Cooling water in-/outlet
- AA Dry compressed air
- AB Air
- AC Oil
- AD Oil/air mixture
- AE Wet compressed air
- AF Refrigerant
- AG Condensate
- AH Cooling water

Technical specifications

GA 90+ - 160 (50 Hz)

TYPE	Maximum working pressure				Capacity FAD (1)			Installed motor power	Noise level (2)	Weight			
	Standard		Full Feature (3)		Standard / Full Feature (3)					Standard		Full Feature (3)	
	bar(e)	psig	bar(e)	psig	l/s	m³/min	cfm			kg	lb	kg	lb
GA 90+ - 5.5 bar	5.5	80	5.3	77	353	21.2	748	90	76	2800	6173	3200	7055
GA 90+ - 7.5 bar	7.5	109	7.3	106	297	17.8	629			2800	6173	3200	7055
GA 90+ - 8.5 bar	8.5	123	8.3	120	284	17.0	602			2800	6173	3200	7055
GA 90+ - 10 bar	10	145	9.8	142	260	15.6	551			2800	6173	3200	7055
GA 110 - 5.5 bar	5.5	80	5.3	77	424	25.4	898	110	77	2700	5952	3100	6834
GA 110 - 7.5 bar	7.5	109	7.3	106	370	22.2	784			2700	5952	3100	6834
GA 110 - 8.5 bar	8.5	123	8.3	120	347	20.8	735			2700	5952	3100	6834
GA 110 - 10 bar	10	145	9.8	142	316	19.0	670			2700	5952	3100	6834
GA 132 - 5.5 bar	5.5	80	5.3	77	502	30.1	1064	132	78	2800	6173	3200	7055
GA 132 - 7.5 bar	7.5	109	7.3	106	440	26.4	932			2800	6173	3200	7055
GA 132 - 8.5 bar	8.5	123	8.3	120	414	24.8	877			2800	6173	3200	7055
GA 132 - 10 bar	10	145	9.8	142	382	22.9	809			2800	6173	3200	7055
GA 160 - 7.5 bar	7.5	109	7.3	106	525	31.5	1112	160	78	2900	6393	3300	7275
GA 160 - 8.5 bar	8.5	123	8.3	120	495	29.7	1049			2900	6393	3300	7275
GA 160 - 10 bar	10	145	9.8	142	460	27.6	975			2900	6393	3300	7275

(1) Unit performance measured according to ISO 1217, Annex C, Edition 4 (2009)

Reference conditions:

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

(2) A-weighted emission sound pressure level at the work station, Lp WSA (re 20 µPa) dB (with uncertainty 3 dB).
Values determined according to noise level test code ISO 2151 and noise measurement standard ISO 9614.

(3) Integrated dryer (FF) : compressed air pressure dewpoint at dryer reference conditions 3°C (37°F).

FAD⁽¹⁾ is measured at the following working pressures:

	Standard	FF
5.5 bar version at	5 bar	5 bar
7.5 bar version at	7 bar	7 bar
8.5 bar version at	8 bar	8 bar
10 bar version at	9.5 bar	9.5 bar

Dimensions

	L	W	H
	mm	mm	mm
GA 90+ - 160	2500	1785	2020
GA 90+ - 160 (FF)	2900	1785	2020

Technical specifications

GA 90+ - 160 (60 Hz)

TYPE	Maximum working pressure				Capacity FAD (1)			Installed motor power	Noise level (2)	Weight			
	Standard		Full Feature (3)		Standard / Full Feature (3)					Standard		Full Feature (3)	
	bar(e)	psig	bar(e)	psig	l/s	m³/min	cfm			kg	lb	kg	lb
GA 90° - 75 psi	5.5	80	5.3	77	316	19.0	670	125	76	3100	6834	3450	7606
GA 90° - 100 psi	7.4	107	7.2	104	303	18.2	642			3100	6834	3450	7606
GA 90° - 125 psi	9.1	132	8.9	129	271	16.3	574			3100	6834	3450	7606
GA 90° - 150 psi	10.9	158	10.7	155	243	14.6	515			3100	6834	3450	7606
GA 110 - 75 psi	5.5	80	5.3	77	425	25.5	901	150	77	2600	5732	3050	6724
GA 110 - 100 psi	7.4	107	7.2	104	372	22.3	788			2600	5732	3050	6724
GA 110 - 125 psi	9.1	132	8.9	129	333	20.0	706			2600	5732	3050	6724
GA 110 - 150 psi	10.9	158	10.7	155	298	17.9	631			2600	5732	3050	6724
GA 132 - 75 psi	5.5	80	5.3	77	505	30.3	1070	175	77	2700	5952	3150	6945
GA 132 - 100 psi	7.4	107	7.2	104	446	26.8	945			2700	5952	3150	6945
GA 132 - 125 psi	9.1	132	8.9	129	400	24.0	848			2700	5952	3150	6945
GA 132 - 150 psi	10.9	158	10.7	155	354	21.2	750			2700	5952	3150	6945
GA 160 - 100 psi	7.4	107	7.2	104	529	31.7	1121	215	78	2900	6393	3250	7165
GA 160 - 125 psi	9.1	132	8.9	129	480	28.8	1017			2900	6393	3250	7165
GA 160 - 150 psi	10.9	158	10.7	155	439	26.3	930			2900	6393	3250	7165

(1) Unit performance measured according to ISO 1217, Annex C, Edition 4 (2009)

Reference conditions:

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

(2) A-weighted emission sound pressure level at the work station, Lp WSA (re 20 µPa) dB (with uncertainty 3 dB).
Values determined according to noise level test code ISO 2151 and noise measurement standard ISO 9614.

(3) Integrated dryer (FF) : compressed air pressure dewpoint at dryer reference conditions 3°C (37°F).

FAD⁽¹⁾ is measured at the following working pressures:

	Standard	FF
75 psi version at	73 psi	73 psi
100 psi version at	100 psi	100 psi
125 psi version at	125 psi	125 psi
150 psi version at	150 psi	150 psi

Dimensions

	L	W	H
	inch	inch	inch
GA 90+ - 160	98.5	70.3	79.5
GA 90+ - 160 (FF)	114.2	70.3	79.5

Technical specifications

GA 110-160 VSD+ (50 Hz)

TYPE		Maximum working pressure				Capacity FAD (1)			Installed motor power	Noise level (2)	Weight			
		Standard		Full Feature (3)		Standard / Full Feature (3)					Standard		Full Feature (3)	
		bar(e)	psig	bar(e)	psig	l/s	m³/min	cfm			kg	lb	kg	lb
GA 110 VSD+ - 8.5 bar	Minimum	5	72	5	72	104 - 407	6.2 - 24.4	220 - 862	110	77	2400	5291	2800	6173
	Nominal	7	101	7	101	101 - 390	6.1 - 23.4	214 - 826						
	Maximum	8.5	123	8.3	120	100 - 356	6.0 - 21.4	212 - 754						
GA 110 VSD+ - 10 bar	Minimum	6	87	6	87	102 - 405	6.1 - 24.3	216 - 858	110	77	2400	5291	2800	6173
	Nominal	9.5	138	9.5	138	97 - 332	5.8 - 19.9	206 - 703						
	Maximum	10	145	9.8	142	96 - 325	5.8 - 19.5	203 - 689						
GA 132 VSD+ - 8.5 bar	Minimum	5	72	5	72	104 - 485	6.2 - 29.1	220 - 1028	132	77	2500	5512	2950	6504
	Nominal	7	101	7	101	101 - 463	6.1 - 27.8	214 - 981						
	Maximum	8.5	123	8.3	120	100 - 427	6.0 - 25.6	212 - 905						
GA 132 VSD+ - 10 bar	Minimum	6	87	6	87	102 - 402	6.1 - 24.1	216 - 852	132	77	2500	5512	2950	6504
	Nominal	9.5	138	9.5	138	97 - 396	5.8 - 23.8	206 - 839						
	Maximum	10	145	9.8	142	96 - 391	5.8 - 23.5	203 - 828						
GA 160 VSD+ - 8.5 bar	Minimum	5	72	5	72	104 - 590	6.2 - 35.4	220 - 1250	160	78	2550	5622	3000	6614
	Nominal	7	101	7	101	101 - 551	6.1 - 33.1	214 - 1168						
	Maximum	8.5	123	8.3	120	100 - 511	6.0 - 30.7	212 - 1083						
GA 160 VSD+ - 10 bar	Minimum	6	87	6	87	102 - 492	6.1 - 29.5	216 - 1042	160	78	2550	5622	3000	6614
	Nominal	9.5	138	9.5	138	97 - 480	5.8 - 28.8	206 - 1017						
	Maximum	10	145	9.8	142	96 - 471	5.8 - 28.3	203 - 998						

(1) Unit performance measured according to ISO 1217, Annex C and E, Edition 4 (2009)

Reference conditions:

- Absolute inlet pressure 1 bar (14.5 psi)

- Intake air temperature 20°C (68°F)

(2) A-weighted emission sound pressure level at the work station, Lp WSA (re 20 µPa) dB (with uncertainty 3 dB).

Values determined according to noise level test code ISO 2151 and noise measurement standard ISO 9614.

(3) Integrated dryer (FF): compressed air pressure dewpoint at dryer reference conditions 3°C (37°F).

FAD⁽¹⁾ is measured at the following working pressures:

	Standard	FF
8.5 bar version at	7 bar	7 bar
10 bar version at	9.5 bar	9.5 bar

Dimensions

	L	W	H
	mm	mm	mm
GA 110-160 VSD+	2500	1785	2020
GA 110-160 VSD+ (FF)	2900	1785	2020

Technical specifications

GA 110-160 VSD+ (60 Hz)

TYPE		Maximum working pressure				Capacity FAD (1)			Installed motor power	Noise level (2)	Weight			
		Standard		Full Feature (3)		Standard / Full Feature (3)					Standard		Full Feature (3)	
		bar(e)	psig	bar(e)	psig	l/s	m³/min	cfm			kg	lb	kg	lb
GA 110 VSD+ - 125 psi	Minimum	5	72	5	72	104 - 407	6.2 - 24.4	220 - 862	150	78	2400	5291	2800	6173
	Nominal	6.9	100	6.9	100	101 - 390	6.1 - 23.4	214 - 826						
	Maximum	9.1	132	8.9	129	97 - 343	5.8 - 20.6	206 - 727						
GA 110 VSD+ - 150 psi	Minimum	6	87	6	87	102 - 405	6.1 - 24.3	216 - 858	150	78	2400	5291	2800	6173
	Nominal	10.4	151	10.4	151	96 - 315	5.8 - 18.9	203 - 667						
	Maximum	10.9	158	10.7	155	95 - 309	5.7 - 18.5	201 - 655						
GA 132 VSD+ - 125 psi	Minimum	5	72	5	72	104 - 485	6.2 - 29.1	220 - 1028	175	78	2500	5512	2950	6504
	Nominal	6.9	100	6.9	100	101 - 466	6.1 - 28.0	214 - 987						
	Maximum	9.1	132	8.9	129	98 - 412	5.9 - 24.7	208 - 873						
GA 132 VSD+ - 150 psi	Minimum	6	87	6	87	102 - 402	6.1 - 24.1	216 - 852	175	78	2500	5512	2950	6504
	Nominal	10.4	151	10.4	151	96 - 378	5.8 - 22.7	203 - 801						
	Maximum	10.9	158	10.7	155	95 - 372	5.7 - 22.3	201 - 788						
GA 160 VSD+ - 125 psi	Minimum	5	72	5	72	104 - 590	6.2 - 35.4	220 - 1250	215	78	2550	5622	3000	6614
	Nominal	6.9	100	6.9	100	101 - 555	6.1 - 33.3	214 - 1176						
	Maximum	9.1	132	8.9	129	98 - 495	5.9 - 29.7	208 - 1049						
GA 160 VSD+ - 150 psi	Minimum	6	87	6	87	102 - 492	6.1 - 29.5	216 - 1042	215	78	2550	5622	3000	6614
	Nominal	10.4	151	10.4	151	96 - 456	5.8 - 27.4	203 - 966						
	Maximum	10.9	158	10.7	155	95 - 449	5.7 - 26.9	201 - 951						

(1) Unit performance measured according to ISO 1217, Annex C and E, Edition 4 (2009)
Reference conditions:
Absolute inlet pressure 1 bar (14.5 psi)
Intake air temperature 20°C (68°F)

(2) A-weighted emission sound pressure level at the work station, Lp WSA (re 20 µPa) dB (with uncertainty 3 dB).

Values determined according to noise level test code ISO 2151 and noise measurement standard ISO 9614.
Pressure dew point of integrated refrigerant dryer at reference conditions: 2°C to 3°C (36°F to 37°F)

(3) Integrated dryer: Compressed air pressure dewpoint at dryer reference conditions 3°C (37°F)

FAD⁽¹⁾ is measured at the following working pressures:

	Standard	FF
5.5 bar version at	5 bar	5 bar
7.5 bar version at	7 bar	7 bar
8.5 bar version at	8 bar	8 bar
10 bar version at	9.5 bar	9.5 bar

Dimensions

	L	W	H
	mm	mm	mm
GA 90+ - 160	2500	1785	2020
GA 90+ - 160 (FF)	2900	1785	2020

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.



www.atlascopco.com





Atlas Copco

**Oil-injected rotary
screw compressors**

GA 180 - 315 (VSD⁺)



Highest reliability, lowest operating costs

The shortest route to maximize your profitability is to minimize your operational costs. With up to 80% of a compressor lifecycle cost coming from the energy it consumes, this should be a clear focus. Atlas Copco's GA compressors with SmartInjection enabled compression elements and IE4 or better class motors are designed to achieve significant energy savings while providing long and trouble-free life even in the harshest environmental conditions.

Efficiency

At the heart of the GA compressors are state-of-the-art compression elements with SmartInjection technology and high efficiency oil cooled IE4 or better class motors. This highly efficient drive train coupled with generous cooling capacity, low internal pressure drops and precise control from the Elektronikon[®] Touch ensures optimum efficiency.

Reliability

The GA compressor's drive train is IP66 rated protecting it completely from environmental dust and moisture ensuring it can operate reliably in the toughest conditions and at ambient temperatures up to 55°C/131°F.

Serviceability

Service time is reduced to a minimum with all service parts grouped together for ease of access and, if greater access is required, the patented portal design enables full access to all components. Each component has also been designed for serviceability, halving the time required to service compared to traditional designs.



Air quality

Atlas Copco is unique in being able to provide a complete range of in house designed products perfectly matched to provide clean dry air, optimum performance and Low Life Cycle costs.



Clean air reduces operating costs.

It's important to have high quality air, because contaminated air creates extra costs. It is better to avoid system contamination rather than deal with the consequences such as product spoilage, maintenance costs, replacing pipe work or leakages. Atlas Copco offers a range of quality air solutions.

Integrated air quality

The GA 180-315 VSD+ is designed to deliver quality air.

- Multiple smaller cartridges simplify and reduce service times and minimize oil carry over.
- The GA full feature comes with an integrated dryer for greater air quality.
- Guaranteed dewpoint of 3°C/37°F
- Continuously monitored dew point.
- New oil separator vessel with filter cartridges.



Air dryers

Our range of air dryers protect your systems and processes in a reliable, energy-efficient and cost-effective way.

Protecting your systems and processes

Treated air helps prevent pipework corrosion, product spoilage and premature failure of pneumatic equipment.

Maintaining the quality of your end product

A complete range of products with dew points from +3 to -70 °C to ensure the correct air quality for your application.

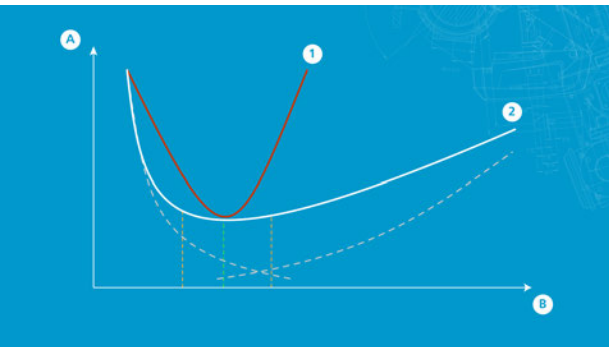
Energy-efficient air dryers

All our air dryers are designed to perform in the most energy-efficient and environmentally friendly way.



Efficiency

Designed for optimal efficiency.



Variable Speed Drive (VSD)

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.

Legend

A = Losses

B = Speed

1 = Total losses traditional element

2 = Total losses AC element

VSD savings

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.

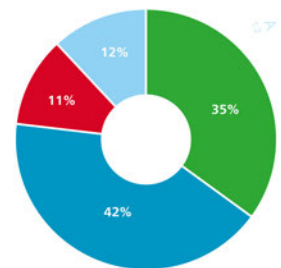
Legend

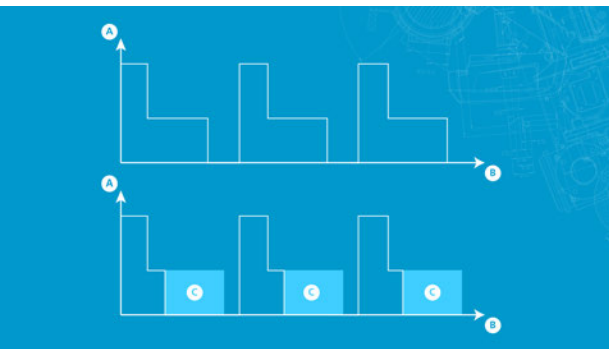
42% = Energy

35% = Energy savings with VSD

12% = Investment

11% = Maintenance





Dual set-point and automatic stop

Most production processes create fluctuating levels of demand which, in turn, can create energy waste in low use periods. Using the Elektronikon[®] unit controller, you can manually or automatically switch between two different setpoints to optimize energy use and reduce costs at low use times. In addition, the sophisticated algorithm runs the drive motor only when needed. As the desired setpoint is maintained while the drive motor's run time is minimized, energy consumption is kept to a minimum.

Legend

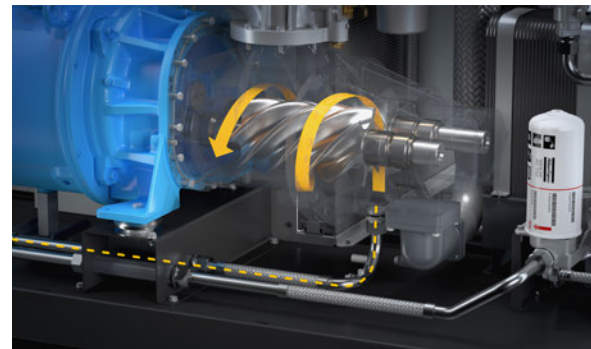
A = Power consumption

B = Time

C = Energy Saving

Components designed for efficiency

- SmartInjection provides exact amount of oil required to element ensuring it always works at peak efficiency.
- High efficiency IE4 (Fixed Speed) and IE5 (VSD+) motor.
- Integrated energy recovery system recovers up to 78% of energy from integrated motor and element oil circuit.
- Dual speed or VSD fan for energy efficiency in lower temperatures.



Elektronikon Mk5 touch

The Elektronikon[®] unit controller is specially designed to maximize the performance of your compressors and air treatment equipment under a variety of conditions. Our solutions provide you with key benefits such as increased energy efficiency, lower energy consumption, reduced maintenance times and less stress... less stress for both you and your entire air system.

SMARTLINK

Monitor your compressed air installation with SMARTLINK

Knowing the status of your compressed air equipment at all times is the surest way to achieve optimal efficiency and maximum availability.

Go for energy efficiency

Customized reports on the energy efficiency of your compressor room.

Increase uptime

All components are replaced on time, ensuring maximum uptime.

Save money

Early warnings avoid breakdowns and production loss.



Optimizer 4.0

Minimizing Excess Pressure

Optimizer 4.0 minimizes the generation of excess compressed air by starting and stopping compressors. Its user friendly interface enables you to set multiple pressure bands, allowing you to optimize your compressor installation for varying circumstances, such as non-productive hours.

Full VSD Benefits

With Optimizer 4.0 you can realize the full energy saving potential of VSD (Variable Speed Drive). It regulates the VSD to ensure that the compressed air output is proportional to the demand, preventing higher pressures than required, excess unloaded running, and spiraling energy costs.

Improving Uptime

Optimizer 4.0 effectively eliminates production downtime caused by unexpected system pressure drops, because it regulates the system pressure instead of the compressor output pressure.

This means Optimizer 4.0 will automatically adjust the system pressure to compensate for pressure drops due to filters, piping and dryers for example.

We also provide additional functionality and services on Optimizer 4.0 to ensure that your energy savings will stand the test of time. Even when your installation needs adaptations or your demand changes.

Service

Properly caring for your air compressor helps you lower your operating costs and minimizes the risk for unplanned breakdowns or production stops. Atlas Copco offers energy efficiency checks, service, repairs, spare parts and maintenance plans for all air compressors. Entrust your servicing to our expert professionals and ensure your business continues to run efficiently. Our plans cover repairs, preventative maintenance, spare parts, and more.

Designed for serviceability

Ease of maintenance

- Service parts grouped together for ease of access.
- Reduced service time for greater uptime.
- Portable design enables full access to all components.
- All components designed for serviceability.
- Oil cooled motors require no service interventions.



Compressor oils, lubricants and fluids

Every type of compressor and vacuum pump needs a specific oil to achieve maximum uptime, performance and lifetime. Our compressed air fluids and lubricants cover all your needs.

Unique mix of additives

Tailored to the specific needs of your equipment.

Anti-oxidation

The high-quality oil ensures maximum protection.

Prevent foaming

Anti-foaming improves your air quality.

Maximize your resources with a Service Plan

Reduce your total cost of ownership and benefit from optimal performance

Save costs

Optimal maintenance will reduce the operational cost of your compressed air and vacuum system.

Increase operational efficiency

Our maintenance expertise makes life easier when it comes to resource management.

High uptime and performance

Specialist service keeps your equipment running as it should, protecting your investment.



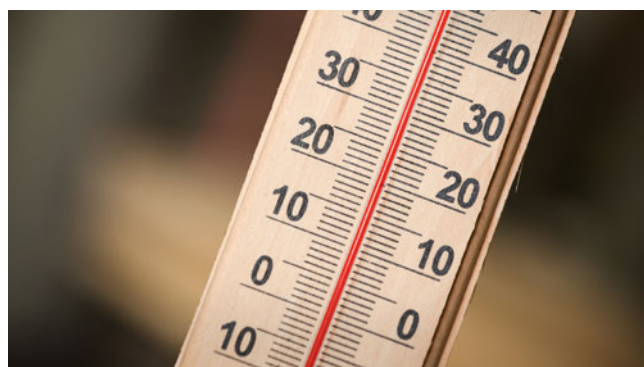
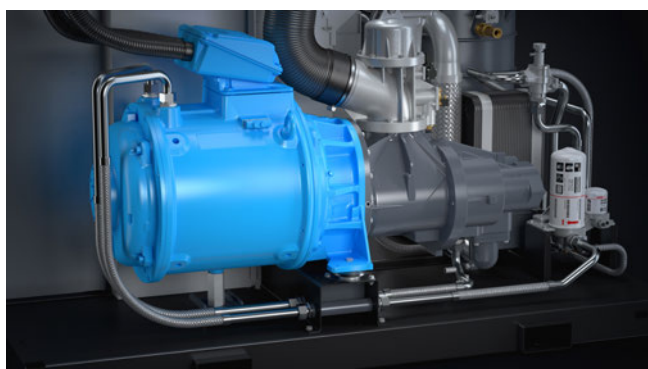
Customized to your needs

A range of optional features are available to ensure the GA compressor is customized to the applications requirements

High ambient temperature variant

Reliable and continuous operation of the compressor in hot and humid environments up to :

- max. 55°C (131°F) for fixed speed pack
- max. 50°C (121°F) for VSD pack



Shock pulse monitoring

Continuous SPM “Shock Pulse Measurement” monitoring system of the compressor element & motor bearings. The sensors are connected to the Elektronikon[®] which is showing the individual vibration levels.

Alarm and/or shutdown levels can be programmed during commissioning of the compressor. With this monitoring system, the compressor can run longer, since overhaul can be done when needed and preventive maintenance can be organized.

Energy recovery

The energy recovery system consists of a build-in stainless steel heat exchanger and thermostatic controlled system to recover the heat from the compressor in the form of warm water or hot water without any adverse influence on the compressor performance.





Witness and performance test

Factory visit and witnessing of the standard performance test of the compressor. The compressor is tested following the Atlas Copco standard test procedure in accordance to the ISO 1217: 2009, annex "C" and "E" (4th edition) for full transparency and peace of mind.

Food grade oil

The option "Roto-Foodgrade oil" allows you to operate the compressor in industries like packaging, pharmaceutical and food and beverage industry, where occasional contact is allowed in and around food processing areas.



Integrated dryer

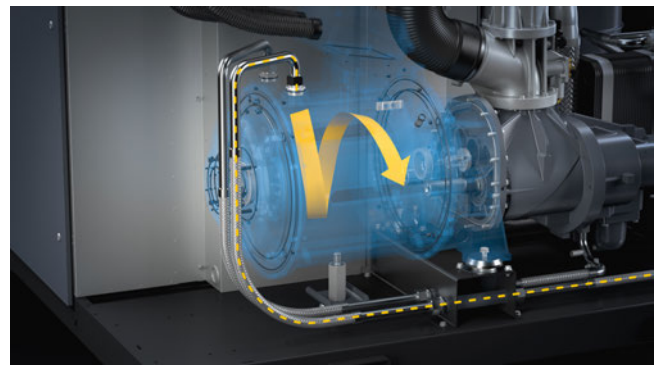
In a GA Full Feature compressor the refrigeration dryer is fully integrated in the compressor unit. This "all-in-one" feature not only reduces the space requirement for installing the compressor but also provides savings on piping installation cost.

Typical dew point of a refrigerant dryer is +3°C (37.4°F) at reference conditions.

Motor thermal protection

Five (PT-1000) temperature sensors are installed in the main motor of which 2 sensors are monitoring the bearings and 3 sensors are monitoring the windings.

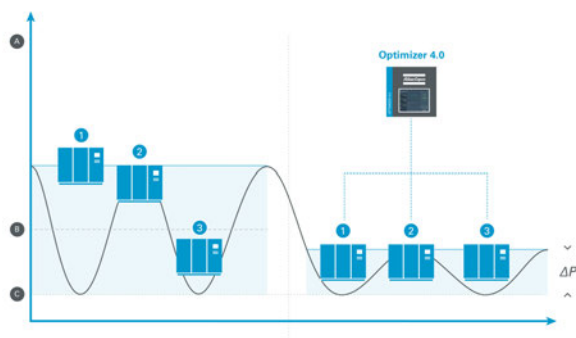
The relevant temperatures are shown on the Elektronikon[®] display and alarms and shutdowns are programmed to protect the compressor motor.



smart AIR solution

Only a complete compressed air system is an energy efficient and reliable solution that delivers the correct compressed air quality. That is why we call our solutions smart AIR solutions.





1. Central controllers

Having a central controller reduces the average pressure band.

It also reduces the operating pressure of your machines.

- By reducing the pressure by 1 bar (or 14.5 psi), your energy usage lowers by 7%.
- By reducing the pressure by 1 bar (or 14.5 psi) decreases air leakages by 13%.

Multiple embedded functions in the Optimizer 4.0 in which pressure, capacity and speed can be regulated.

Legend

A = Net pressure

B = Average pressure

C = Min. system pressure

2. Energy efficient and reliable compressors

All smart AIR solutions start with picking the correct components in the correct combination. Choosing energy efficient compressors, paying special attention to the mix of compressors will be a major contributor to a smart AIR solution.

Our sound proof design contributes to a better working environment around the compressors.

Our compressors have been designed with maintenance in mind, reducing the downtime of machines and improving availability of compressed air.

3. Variable Speed Drive (VSD) compressors

Compressed air demand of most applications varies widely. Adding one or multiple VSD compressors to the installation will greatly help to improve energy efficiency of the total installation, stability of compressed air pressure and reliability, thanks to more stable regime of each machine.



4. Ventilation

Compressors generate heat. Adequate evacuation of this heat will ensure favorable working conditions for compressors and dryers alike.

5. Air receiver

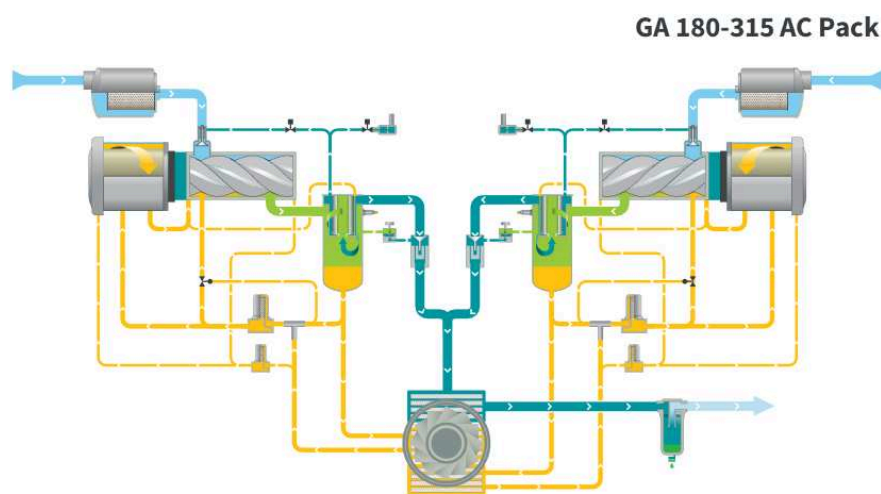
Even with a Variable Speed Drive compressor, having an appropriately sized buffer tank for compressed air will help smoothening the variation in demand and allow compressors to work in more stable operating conditions, thus helping both energy efficiency and reliability.

6. Air treatment portfolio

Atlas copco has a wide air treatment portfolio that matches your needs. Our portfolio ranges from removing water, oil and dust from your compressed air to generating Oxygen and Nitrogen on site.

Flowchart

The oil & air flow, step by step



1. Filtration & compression

The air is drawn into the compressor through the inlet filter and is compressed in the oil injected rotary screw compression element via the air intake (load-unload) valve. Lubrication fluid is injected during the compression phase into the air. This not only reduces the wear of the elements but also cools them.

2. Air & oil separation

The compressed air/oil mixture passes through a non-return valve to the oil separator element to separate the oil from the air.

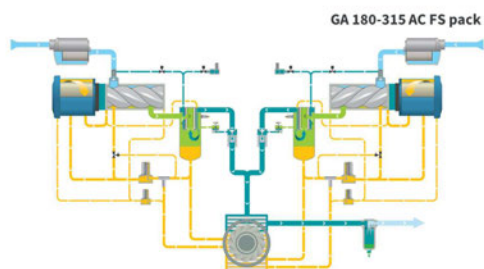
The wet compressed air, represented by the dark blue/gree then passes through a minimum pressure valve and is cooled by an air-cooled aftercooler.

3. Cooling

Low noise axial cooling fans provide cooling air to the oil cooler and after cooler, ensuring satisfactory running temperatures as well as ventilating the compressor enclosure.

4. Moisture separator

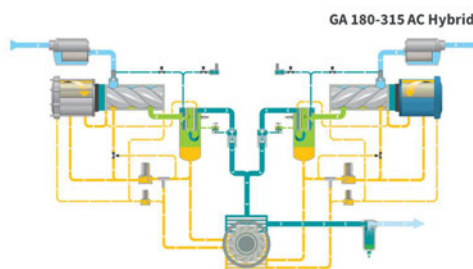
The condensed moisture is removed by a low pressure drop moisture separator and electronic condensate drain. This results in dry compressed air is that can be used in your application.



5. Oil flow

Lubrication fluid contained in the oil receiver flows under differential pressure to a thermostatic bypass valve, air cooled oil cooler, high efficiency oil filter and oil stop valve before being injected into the compression element where it cools, seals and lubricates the compression process.

The high efficiency oil filter provides superior filtration compared to conventional filters resulting in cleaner lubricant. The thermostatic bypass valve ensures that the compressor quickly reaches optimum operating temperature on start-up and maintains temperature during periods of low load by allowing cold lubricant to bypass the oil cooler.



Technical specifications

Technical datasheet of the GA 180-315 (VSD) (FF) series

GA 180 - 315 (VSD+) (50 Hz)

Type	Maximum working pressure				Capacity FAD (1)			Installed motor power	Noise level (2)	Weight				
	Standard		Full Feature (3)		Standard / Full Feature (3)					Standard		Full Feature (3)		
	bar(e)	psig	bar(e)	psig	l/s	m³/min	cfm	kW	dB(A)	kg	lb	kg	lb	
GA 180 - 5.5 bar	5.5	80	5.3	77	690	41.4	1462	180	70	5700	12566	6400	14110	
GA 180 - 7.5 bar	7.5	109	7.3	106	585	35.1	1240		70					
GA 180 - 8.5 bar	8.5	123	8.3	120	558	33.5	1182		67					
GA 180 - 10 bar	10	145	9.8	142	510	30.6	1081		68			6300	13889	
GA 200 - 5.5 bar	5.5	80	5.3	77	833.2	50.0	1765	71	5900	13007	6500			14330
GA 200 - 7.5 bar	7.5	109	7.3	106	729	43.7	1545	74						
GA 200 - 8.5 bar	8.5	123	8.3	120	686	41.2	1454	70						
GA 200 - 10 bar	10	145	9.8	142	624	37.4	1322	70						
GA 250 - 5.5 bar	5.5	80	5.3	77	985	59.1	2087	264	76	6000	13228	6700	14771	
GA 250 - 7.5 bar	7.5	109	7.3	106	868	52.1	1839		75					
GA 250 - 8.5 bar	8.5	123	8.3	120	817	49.0	1731		71					
GA 250 - 10 bar	10	145	9.8	142	754	45.2	1598		71					
GA 315 - 7.5 bar	7.5	109	73	106	1036	62.2	2072	320	73	6200	13669	6800	14991	
GA 315 - 8.5 bar	8.5	123	8.3	120	978	58.7	2072		73					
GA 315 - 10 bar	10	145	9.8	142	911	54.7	1930		70					
GA 200 VSD+ 8.5 bar	8.5	123	8.3	120	195-725	12-43.5	413-1536	220	73	5000	11023	5700	12566	
GA 200 VSD+ 10 bar	10	145	9.8	142	193-665	11.5-40	409-1409		67	5100	11244	5600	12346	
GA 250 VSD+ 8.5 bar	8.5	123	8.3	120	195-865	12-51.9	413-1833	264	71	5200	11464	5800	12787	
GA 250 VSD+ 10 bar	10	145	9.8	142	193-782	11.5-47	409-1657		75	5200	11464	5800	12787	
GA 315 VSD+ 8.5 bar	8.5	123	8.3	120	195-1032	12-61.9	413-2187	320	77	5200	11464	5900	13007	
GA 315 VSD+ 10 bar	10	145	9.8	142	193-955	11.5-57.3	409-2023		77	5200	11464	5900	13007	

FAD(1) is measured at the following working pressures:

	Standard
5.5 bar (75 psi) version at	5 bar (73 psi)
7.5 bar (100 psi) version at	7 bar (100 psi)
8.5 bar (125 psi) version at	8 bar (125 psi)
10 bar (150 psi) version at	9.5 bar (150 psi)

Technical specifications GA 180 - 315 (VSD+) (60 Hz)

TYPE	Maximum working pressure				Capacity FAD (1)			Installed motor power	Noise level (2)	Weight			
	Standard		Full Feature (3)		Standard / Full Feature (3)					Standard		Full Feature (3)	
	bar(e)	psig	bar(e)	psig	l/s	m³/min	cfm			hp	dB(A)	kg	lb
GA 180 - 75 psi	5.5	80	5.3	77	622	37.3	1318	240	74	6000	13228	6800	14991
GA 180 - 100 psi	7.4	107	7.2	104	596	35.8	1263		76	6200	13669		
GA 180 - 125 psi	9.1	132	8.9	129	536	32.2	1136		73				
GA 180 - 150 psi	10.9	158	10.7	155	479	28.7	1015		75				
GA 200 - 75 psi	5.5	80	5.3	77	836	50.2	1771	295	77	5700	12566	6400	14110
GA 200 - 100 psi	7.4	107	7.2	104	735	44.1	1557		76				
GA 200 - 125 psi	9.1	132	8.9	129	660	39.6	1398		76				
GA 200 - 150 psi	10.9	158	10.7	155	591	35.5	1252		75				
GA 250 - 75 psi	5.5	80	5.3	77	991	59.5	2100	355	78	5900	13007	6500	14330
GA 250 - 100 psi	7.4	107	7.2	104	879	52.7	1862		77				
GA 250 - 125 psi	9.1	132	8.9	129	791	47.5	1676		74				
GA 250 - 150 psi	10.9	158	10.7	155	701	42.1	1485		75				
GA 315 - 100 psi	7.4	107	7.2	104	1043	62.6	2210	430	76	6000	13228	6700	14771
GA 315 - 125 ps	9.1	132	8.9	129	950	57.0	2013		76				
GA 315 - 150 psi	10.9	158	10.7	155	873	52.4	1850		76				
GA 200 VSD+ 125 psi	9.1	132	8.9	129	194-706	11.6-42.3	411-1496	295	72	5000	11023	5700	12566
GA 200 VSD+ 150 psi	10.9	158	10.7	155	190-630	11.4-37.8	403-1335		69				
GA 250 VSD+ 125 psi	9.1	132	8.9	129	194-840	11.6-50.4	411-1780	355	70	5200	11464	5800	12787
GA 250 VSD+ 150 psi	10.9	158	10.7	155	190-755	11.4-45.3	403-1600		73				
GA 315 VSD+ 125 psi	9.1	132	8.9	129	194-1004	11.6-60.2	411-2127	430	76	5300	11684	5900	13007
GA 315 VSD+ 150 psi	10.9	158	10.7	155	190-910	11.4-54.6	403-1928		76				

(1) Unit performance measured according to ISO 1217, Annex C, Edition 4 (2009)
Reference conditions:
- Absolute inlet pressure 1 bar (14.5 psi).
- Intake air temperature 20°C (68°F).
(2) A-weighted emission sound pressure level at the work station, Lp WSA (re 20 µPa) dB (with uncertainty 3 dB).
Values determined according to noise level test code ISO 2151 and noise measurement standard ISO 9614.
(3) Integrated dryer (FF) : compressed air pressure dewpoint at dryer reference conditions 3°C (37°F).

FAD(1) is measured at the following working pressures:

	Standard	FF
75 psi version at	73 psi	73 psi
100 psi version at	100 psi	100 psi
125 psi version at	125 ps	125 psi
150 psi version at	150 psi	150 psi

Dimensions

	L		W		H	
	mm	inch	mm	inch	mm	inch
GA 180 - 315 (VSD+) Pack (Air cooled)	4390	173	2090	82	2020	79
GA 180 - 315 (VSD+) Full Feature (Air cooled)	5020	198	2090	82	2020	79
GA 180 - 315 (VSD+) Pack (Water cooled)	3130	123	2090	82	2020	79
GA 180 - 315 (VSD+) Full Feature (Water cooled)	3760	148	2090	82	2020	79

Notes

[illegible]

