

Oil-injected rotary screw compressors

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

Sustainable Productivity

Atlas Copco





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.



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.

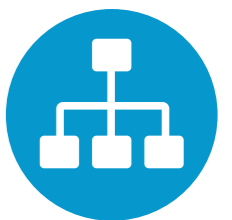


Reliable

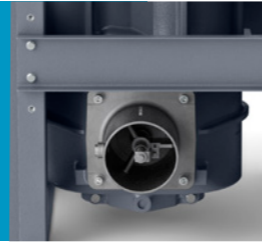
- Completely enclosed frequency drive and drive train ensure performance even in the harshest environments.
- Based on unique combination of proven technologies and existing components, optimally brought together by Atlas Copco's experience and know-how.

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.



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.

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.

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.



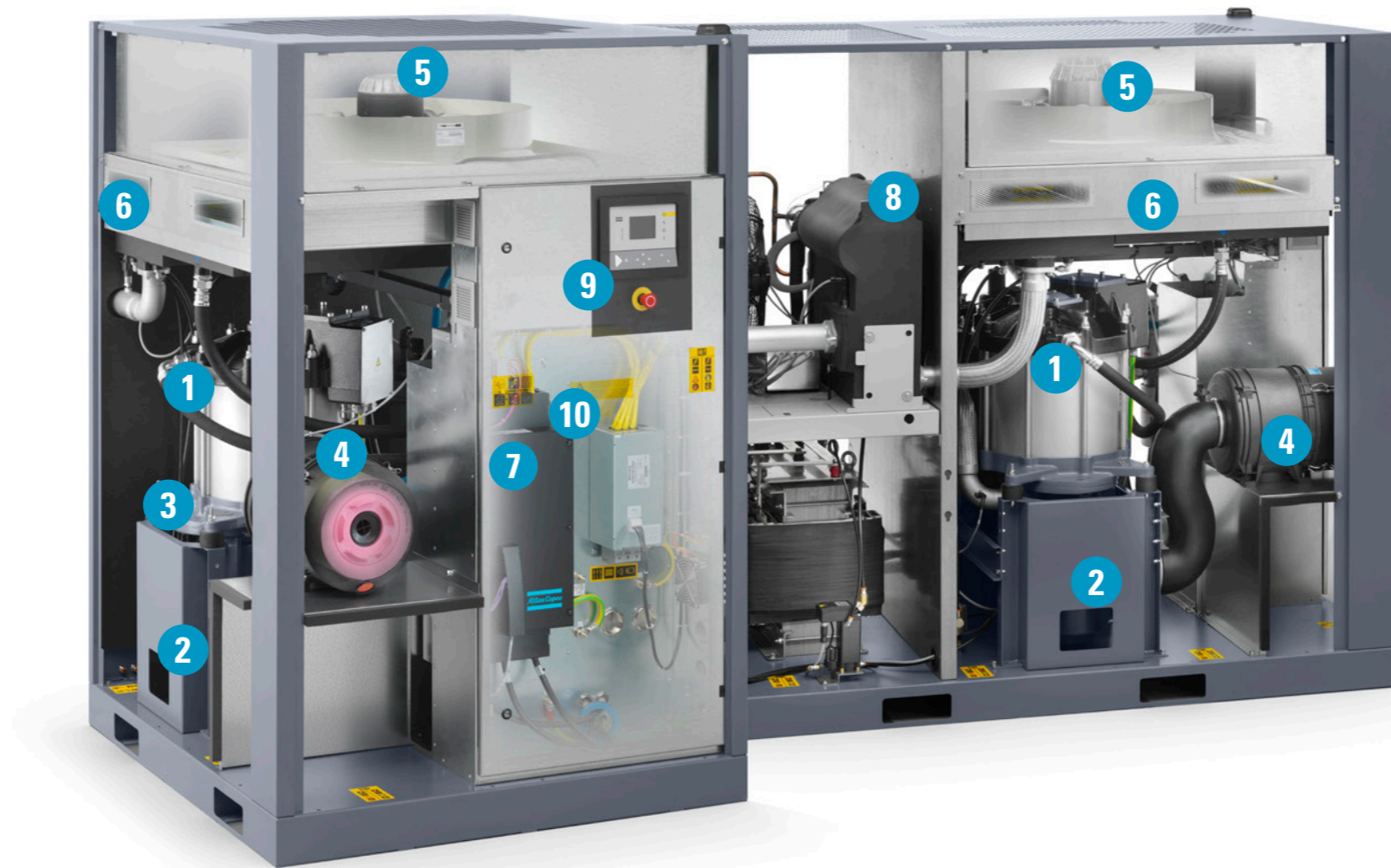
9 Elektronikon® Graphic controller

- 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.



Atlas Copco

GA90VSD+FF



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. VSD+ works with in-house designed permanent magnet motors.

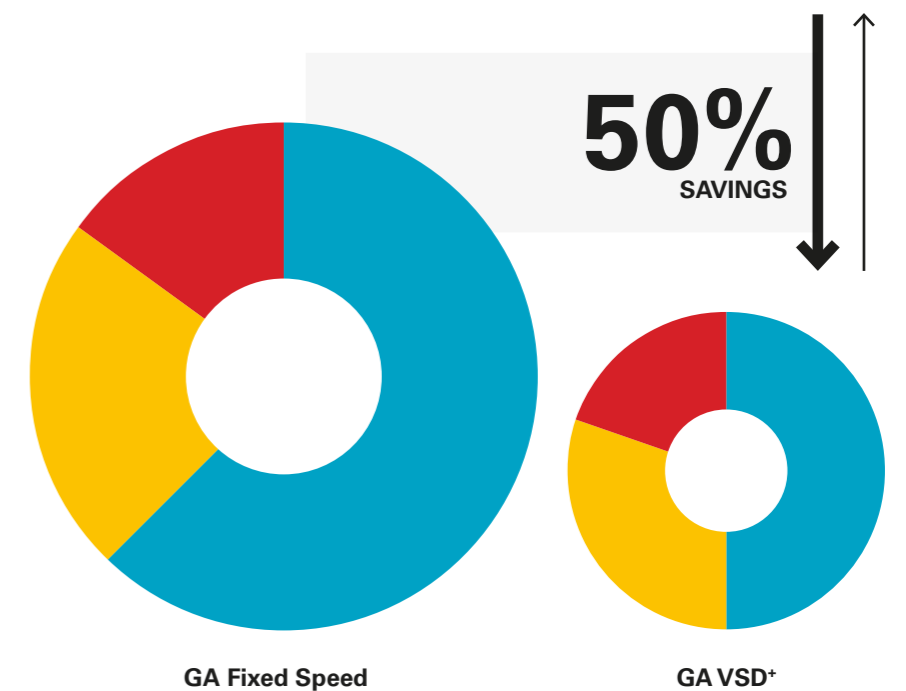
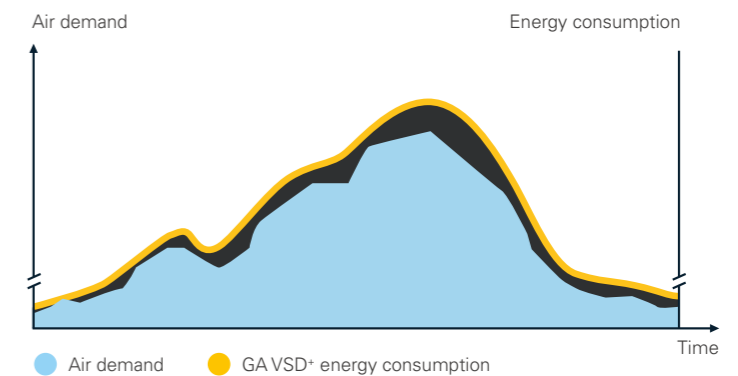
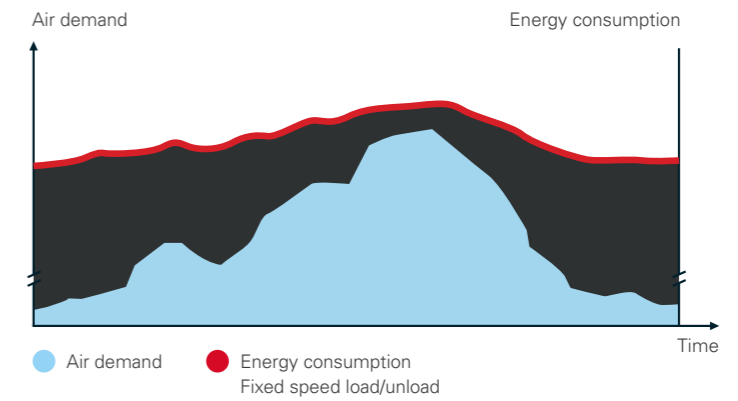


Why Atlas Copco Variable Speed Drive+ technology?

- 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.
- 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.



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.

CONTROL

The Elektronikon[®] Graphic 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 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

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.

TECHNICAL SPECIFICATIONS GA 75-110 VSD+

Type	Working pressure		Capacity FAD* (min-max)			Installed motor power		Noise level**	Weight WorkPlace	Weight WorkPlace Full Feature
	bar(e)	psig	l/s	m³/hr	cfm	kW	hp	dB(A)	kg	kg
50/60 Hz version										
GA 75 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).

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)

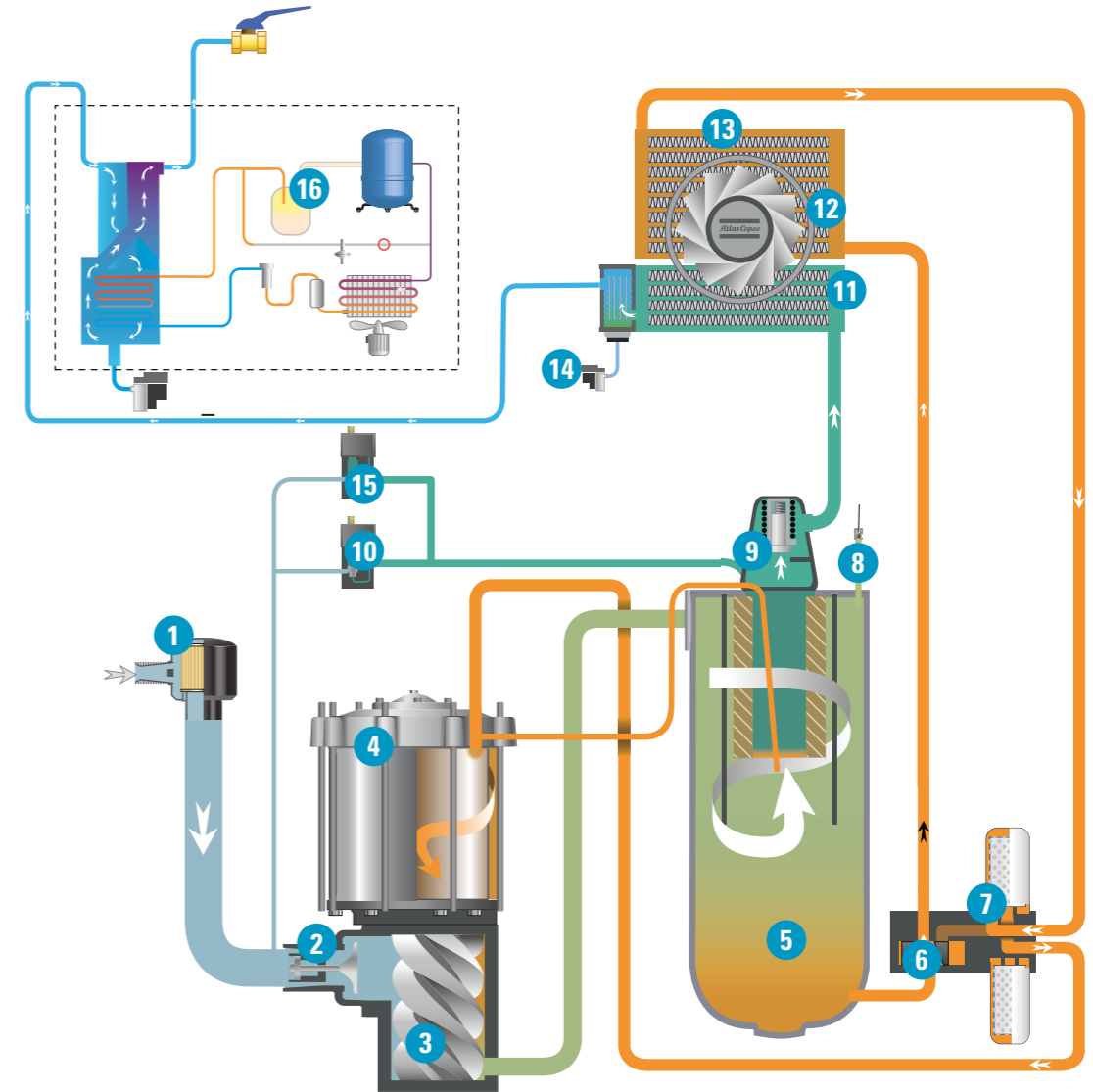
Maximum working pressure: 13 bar(e) (188 psig)

Options

Energy recovery
Pre-filter
Tropical thermostat
FoodGrade 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+



- | | | |
|---|--|--------------------|
| 1 Inlet filter | 11 After cooler | Wet compressed air |
| 2 VSD valve | 12 Fan | Condensate |
| 3 Screw element | 13 Oil cooler | Dry compressed air |
| 4 Interior permanent magnet motor (iPM) | 14 Electronic drain (one drain mounted on after cooler for standard models, for Full Feature models a second drain is mounted on the ID dryer) | Intake air |
| 5 Air/oil vessel separator | 15 Condensate prevention cycle | Air/oil mixture |
| 6 Thermostatic bypass valve | 16 Dryer | Oil |
| 7 Oil filter | | |
| 8 Safety valve | | |
| 9 Minimum pressure valve | | |
| 10 Solenoid valve | | |

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 75-110 VSD+	1400	1300	1968	55.12	51.18	77.48	2178	1300	1968	85.75	51.18	77.48

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.



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Designs and specifications are subject to change without notice or obligation.
Read all safety instructions in the manual before usage.

The Atlas Copco logo, consisting of the brand name 'Atlas Copco' in a stylized, italicized font, positioned between two horizontal blue bars.