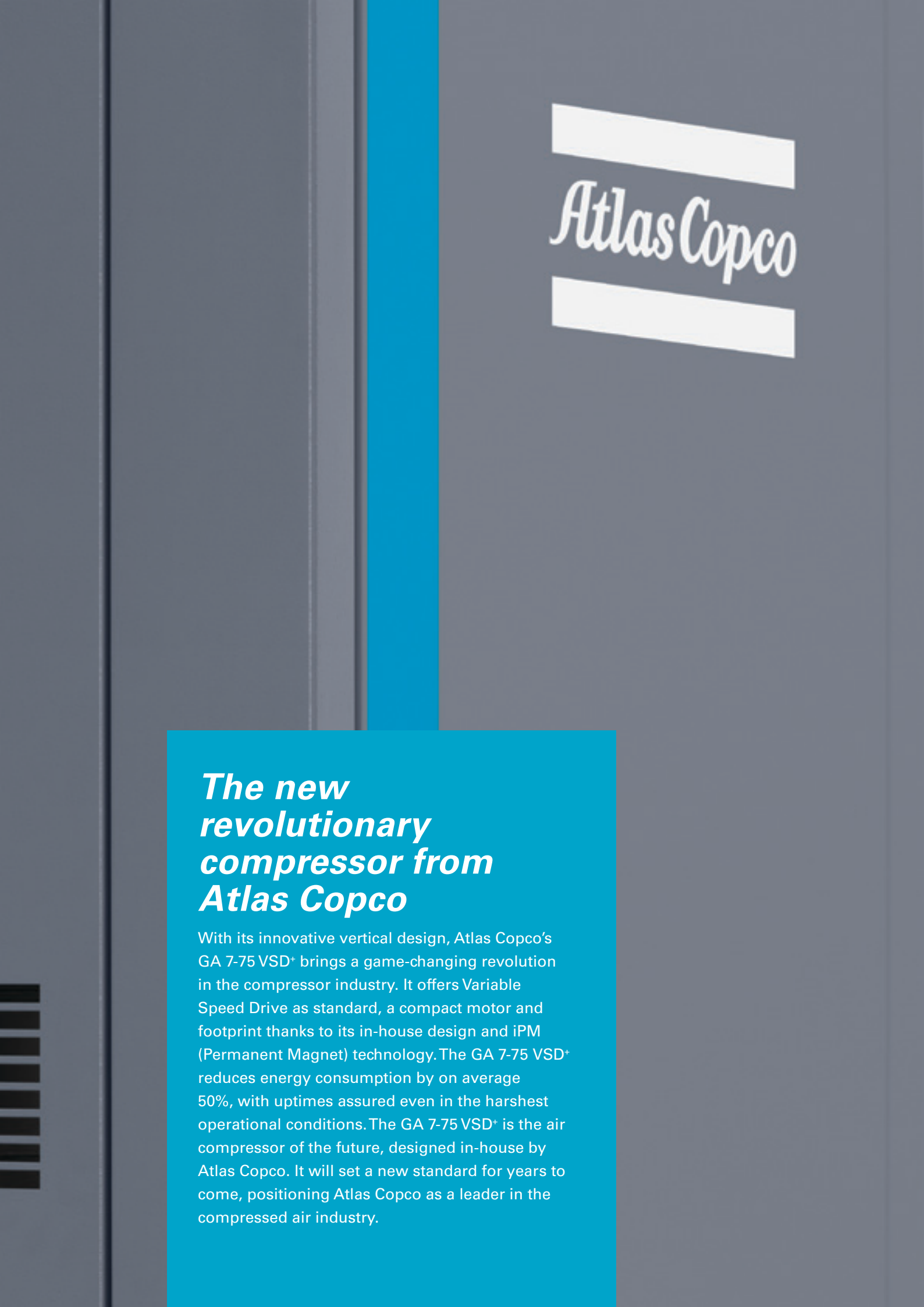
Oil-injected rotary screw compressors

GA 7-75 VSD+ (7-75 kW/10-100 hp)

Sustainable Productivity

Atlas Copco



The new revolutionary compressor from Atlas Copco

With its innovative vertical design, Atlas Copco's GA 7-75 VSD+ brings a game-changing revolution in the compressor industry. It offers Variable Speed Drive as standard, a compact motor and footprint thanks to its in-house design and iPM (Permanent Magnet) technology. The GA 7-75 VSD+ reduces energy consumption by on average 50%, with uptimes assured even in the harshest operational conditions. The GA 7-75 VSD+ is the air compressor of the future, designed in-house by Atlas Copco. It 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 7-75 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 15% 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 12% over the range.
- Efficient fan motor below 37 kW (ERP 2015) reduces electricity consumption and noise levels.
- IE4 motor efficiency (iPM), outperforming IE3 efficiency levels.

Reliable

- Low maintenance: fewer components, increased uptime.
- Worry-free: the GA 7-75 VSD+ has been extensively field-tested.
- Based on unique combination of proven technologies and existing components, optimally brought together by Atlas Copco's unique experience and know-how.

Smart

- Elegant and revolutionary design.
- Extra compact footprint.
- Fewer components & few options: impressive list of standard features.
- Ecological design, efficient material usage.

INSIDE THE INNOVATIVE GA 7-37 VSD+

DRIVE TRAIN

1

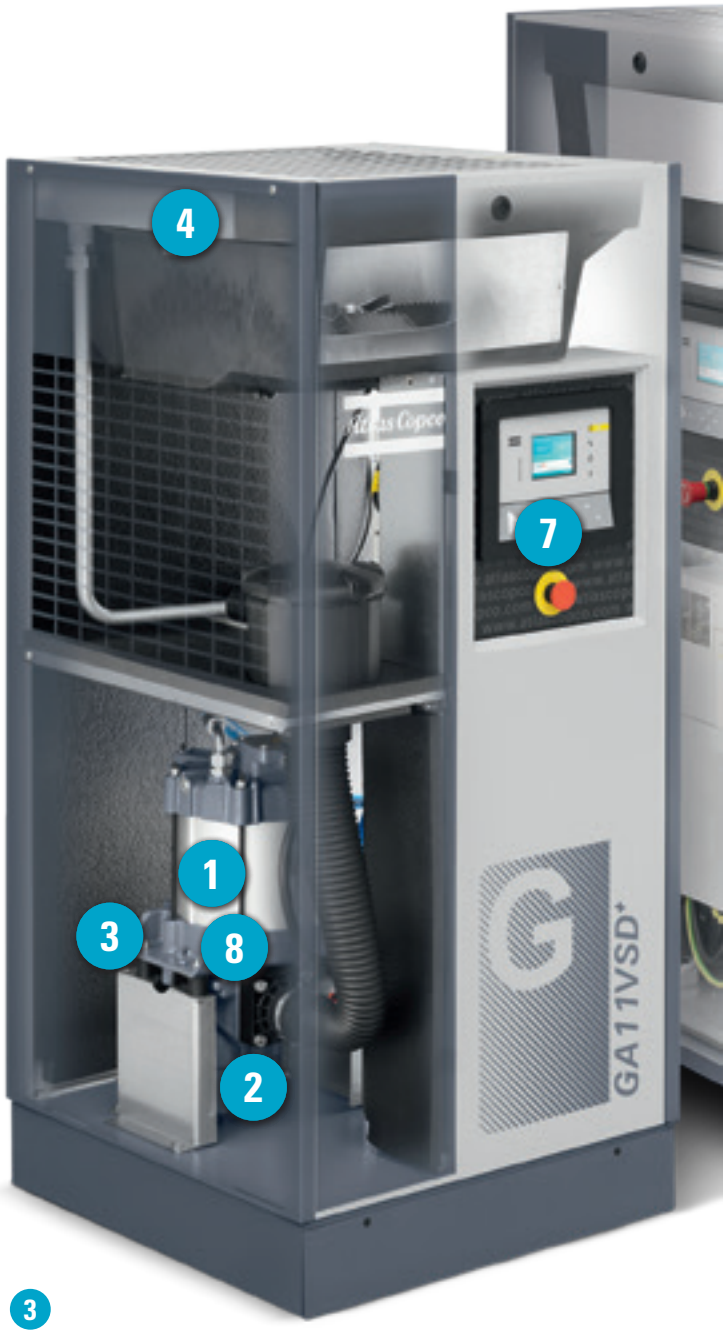
Interior Permanent Magnet (IPM) motor

- Very high efficiency: IE4.
- Compact, customized design for optimal cooling by oil.
- Designed in-house in Belgium.
- IP66 vs. IP55.
- No cooling air flow required.
- Oil-lubricated motor bearing: no (re)grease(ing), increased uptime.

2

Element

- Made by Atlas Copco.
- Robust and silent.



3

Direct drive

- Vertical design, fewer parts.
- Oil-cooled, pressure-tight.
- No gears or belts, no shaft seal.
- Compact: footprint down 60%.

4

Innovative fan

- Based on the newest technologies.
- In compliance with ERP2015 efficiency.
- Low noise levels.

5

Robust oil filter/separator

- Integrated bypass valve with the oil filter.
- Easy maintenance.

6

Electronic no-loss water drain

- Included as standard.
- Efficient removal of condensate without loss of compressed air.
- Manual integrated bypass for effective condensate removal in case of power failure.

7

Elektronikon® controller

- Integrated smart algorithms reduce system pressure and energy consumption.
- Warning indications, maintenance scheduling and online status visualization.
- Graphic display of key parameters (day, week, month) and 32 language settings.

9

VSD+ cubicle

- VSD+ superior to idling machines.
- Electrical components remain cool, enhancing lifetime of components.
- Dedicated drive for iPM technology motors.
- 5% DC choke as standard.
- Heat dissipation of inverter in separate compartment.

8

Sentinel valve

- No inlet arrestor.
- No blow off losses.
- Maintenance free.

INSIDE THE ROBUST GA 37-75 VSD+

DRIVE TRAIN

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

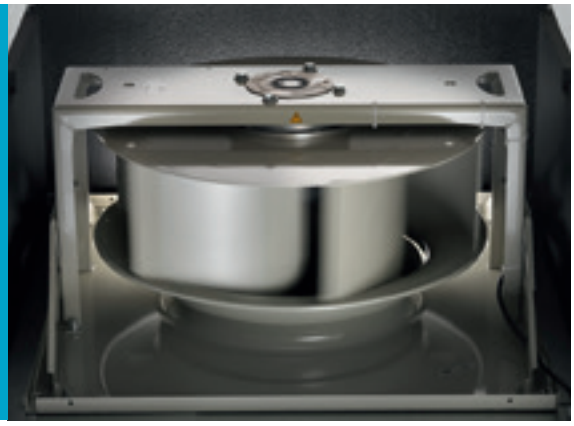
Direct drive

- 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.

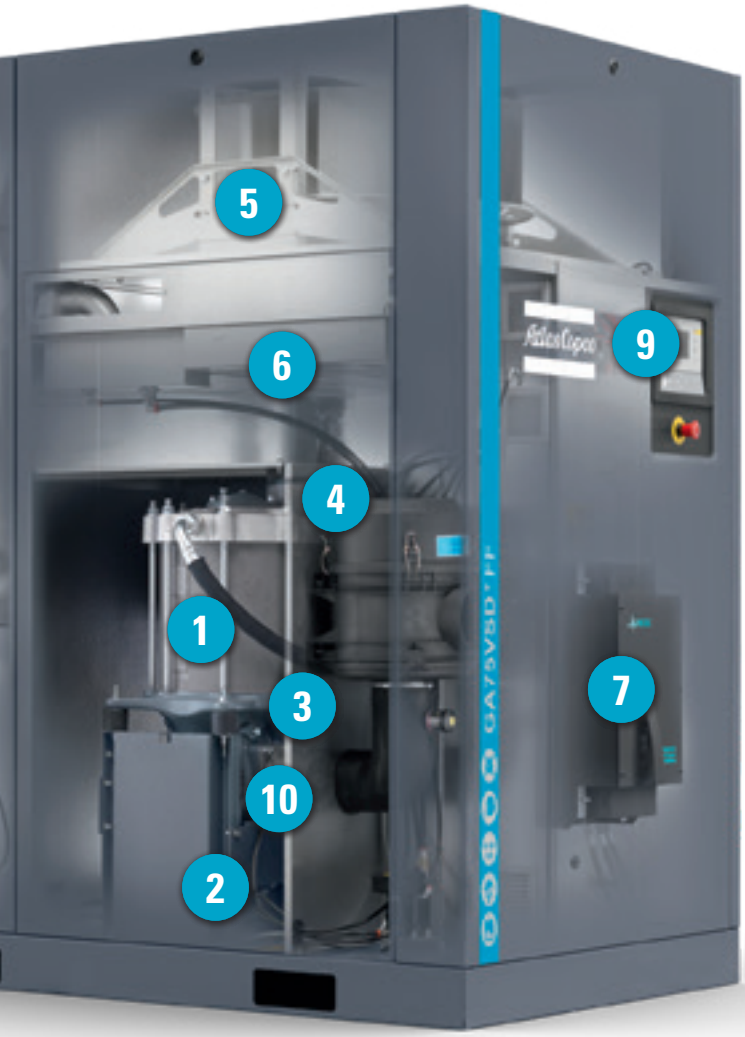


5 Radial fan

- 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 Neos Inverter

- Cool cubicle: no cooling fans needed.
- Fully enclosed: no dust ingress possible.
- External heatsink with separate cooling.

8 Integrated dryer

- Extra compact footprint.
- Refrigerant R410A.

9 Elektronikon® controller

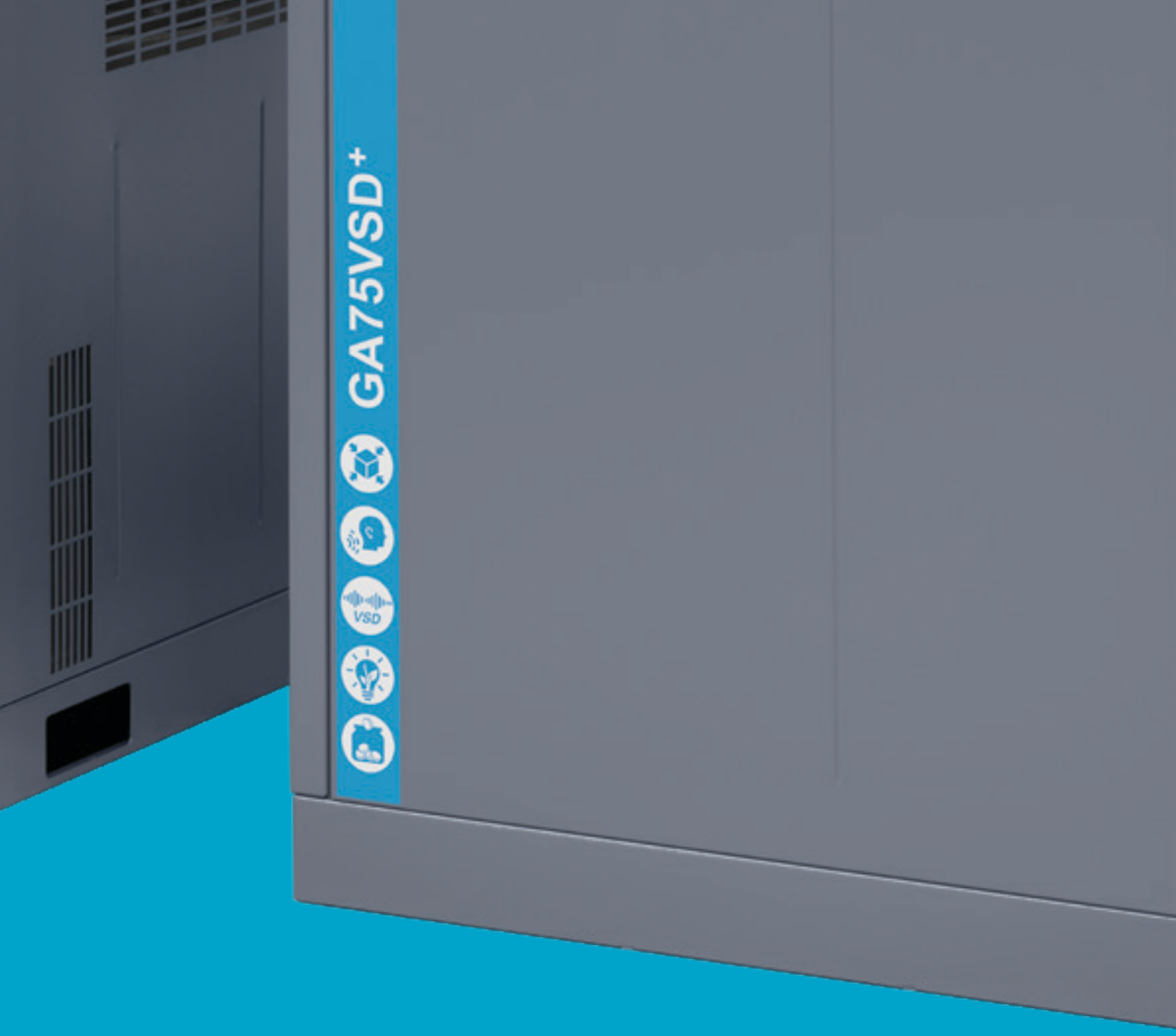
- Integrated smart algorithms reduce system pressure and energy consumption.
- Monitoring features include warning indications, maintenance scheduling and online visualization of machine's condition.

11 VSD⁺ cubicle

- VSD⁺ superior to idling machines.
- Electrical components remain cool, enhancing lifetime of components.
- Dedicated drive for iPM technology motors.
- 5% DC choke as standard.
- Heat dissipation of inverter in separate compartment.

10 Sentinel valve

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



VSD+ FOR 50% AVERAGE ENERGY SAVINGS

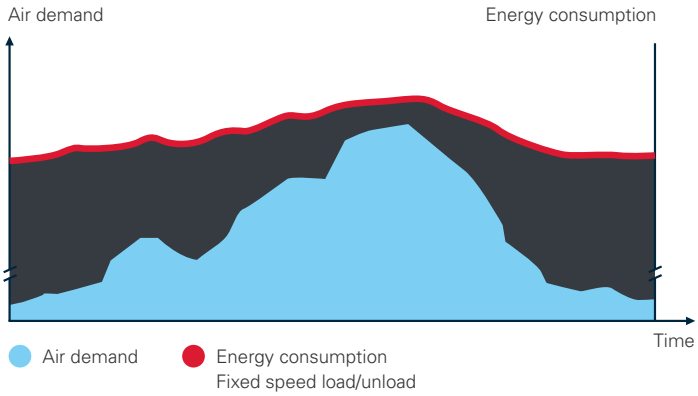
Atlas Copco's GA Variable Speed Drive+ (VSD+) technology closely matches the air demand by automatically adjusting the motor speed. Combined with the innovative design of the iPM (Permanent Magnet) motor, this results in average energy savings of 50% and an average cut of 37% in the lifecycle cost of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

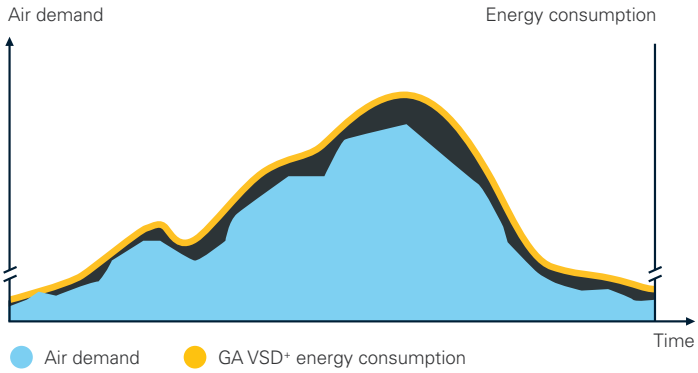
Why Atlas Copco Variable Speed Drive+ technology?

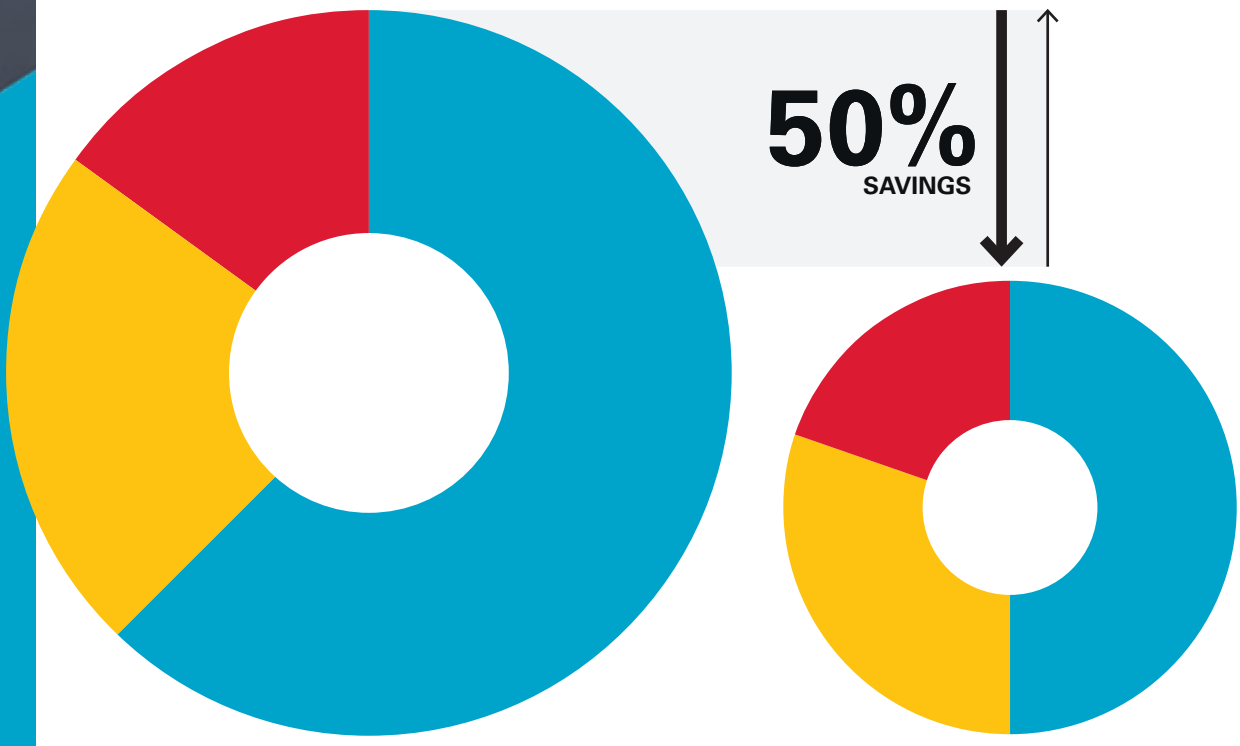
- On average 50% energy savings with an extensive flow range (20-100%).
- Integrated Elektronikon® Graphic controller controls the motor speed and high efficiency frequency inverter.
- No wasted idling times or blow-off losses during operation.
- Compressor can start/stop under full system pressure without 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.







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

A STEP AHEAD IN MONITORING AND CONTROLS

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

Dual pressure set point

Most production processes create fluctuating demands which, in turn, can create energy waste in low use periods. Using the Elektronikon®, you can manually or automatically create two different system pressure bands to optimize energy use and reduce costs.

Integrated Saver Cycles

Fan Saver Cycle reduces the energy consumption by switching off the fan in light load applications. Using an ambient sensor to monitor the required dew point suppression, the Elektronikon® starts and stops the dryer, minimizing energy use.

Week timer

An on-board clock enables timers to be set up to support any working scheme – per day, per week or completely customizable to your specific situation and needs.

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 product. Maintenance costs can far exceed air treatment costs. Our compressors provide the clean, dry air that improves your system's reliability, avoids costly downtime and production delays, and safeguards the quality of your products.

Save money and the environment

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

On average 50% energy savings with newly designed integrated dryers

- Pressure dew point of 3°C (100% relative humidity at 20°C).
- 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 reduced significantly by an average of 50% by reducing the amount of refrigerant in the new dryer.

SMARTLINK*: Data Monitoring Program

- Remote monitoring system that helps you optimize your compressed air system and save energy and costs.
- Provides a complete insight in your compressed air network.
- Anticipates on potential problems by warning you up-front.

** Please contact your local sales representative for more information.*

TECHNICAL SPECIFICATIONS GA 7-37 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/h	cfm	kW	hp	dB(A)	kg	kg
50/60 Hz version										
GA 7 VSD+	5.5	80	7.2-21.9	25.9-78.8	15.2-46.4	7.5	10	62	193	277
	7	102	7.0-21.7	25.2-78.1	14.8-46.0	7.5	10	62	193	277
	9.5	138	6.8-18.0	24.5-64.8	14.4-38.1	7.5	10	62	193	277
	12.5	181	7.3-14.2	26.3-51.12	15.5-30.1	7.5	10	62	193	277
GA 11 VSD+	5.5	80	7.3-32.9	26.3-118.4	15.5-69.7	11	15	63	196	280
	7	102	7.3-32.5	26.3-117.0	15.5-68.8	11	15	63	196	280
	9.5	138	7.0-27.2	25.2-97.9	14.8-57.6	11	15	63	196	280
	12.5	181	7.6-23.5	27.4-84.6	16.1-49.8	11	15	63	196	280
GA 15 VSD+	5.5	80	7.2-42.3	25.9-152.3	15.2-89.6	15	20	64	199	288
	7	102	7.1-41.8	25.6-150.5	15.0-88.6	15	20	64	199	288
	9.5	138	6.8-35.5	24.5-127.8	14.4-75.2	15	20	64	199	288
	12.5	181	7.3-27.9	26.3-100.4	15.5-59.1	15	20	64	199	288
GA 18 VSD+	4	58	15.0 - 63.2	53.9 - 227.5	31.7 - 133.8	18	25	67	367	480
	7	102	14.7 - 61.8	53.0 - 222.6	31.2 - 131.0	18	25	67	367	480
	9.5	138	16.9 - 53.0	61.0 - 190.8	35.9 - 112.3	18	25	67	367	480
	12.5	181	16.3 - 43.0	58.5 - 154.8	34.4 - 91.1	18	25	67	367	480
GA 22 VSD+	4	58	15.2 - 76.1	54.6 - 274.0	32.1 - 161.2	22	30	67	363	485
	7	102	14.8 - 74.3	53.3 - 267.6	31.3 - 157.4	22	30	67	363	485
	9.5	138	17.1 - 64.5	61.5 - 232.1	36.2 - 136.6	22	30	67	363	485
	12.5	181	16.9 - 53.5	60.7 - 192.5	35.7 - 113.2	22	30	67	363	485
GA 26 VSD+	4	58	14.8 - 85.8	53.2 - 309.0	31.3 - 181.8	26	35	67	373	490
	7	102	14.5 - 85.3	52.1 - 307.2	30.6 - 180.7	26	35	67	373	490
	9.5	138	16.9 - 77.9	60.7 - 280.5	35.7 - 165.1	26	35	67	373	490
	12.5	181	16.3 - 64.1	58.8 - 230.8	34.6 - 135.8	26	35	67	373	490
GA 30 VSD+	4	58	15.1 - 98.0	54.3 - 352.8	31.9 - 207.6	30	40	67	376	500
	7	102	15.0 - 97.4	54.1 - 350.5	31.8 - 206.2	30	40	67	376	500
	9.5	138	17.2 - 85.6	61.7 - 308.2	36.3 - 181.3	30	40	67	376	500
	12.5	181	16.7 - 72.0	60.0 - 259.1	35.3 - 152.4	30	40	67	376	500
GA 37 VSD+	4	58	15.3 - 116.4	55.1 - 418.9	32.4 - 246.4	37	50	67	376	500
	7	102	14.8 - 114.8	53.2 - 413.2	31.3 - 243.1	37	50	67	376	500
	9.5	138	17.1 - 102.1	61.5 - 367.7	36.2 - 216.3	37	50	67	376	500
	12.5	181	16.4 - 86.6	58.9 - 311.8	34.6 - 183.4	37	50	67	376	500

** Unit performance measured according ISO 1217 ed. 4 2009, annex E, latest edition.*
*** Mean noise level measured at a distance of 1 m 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.

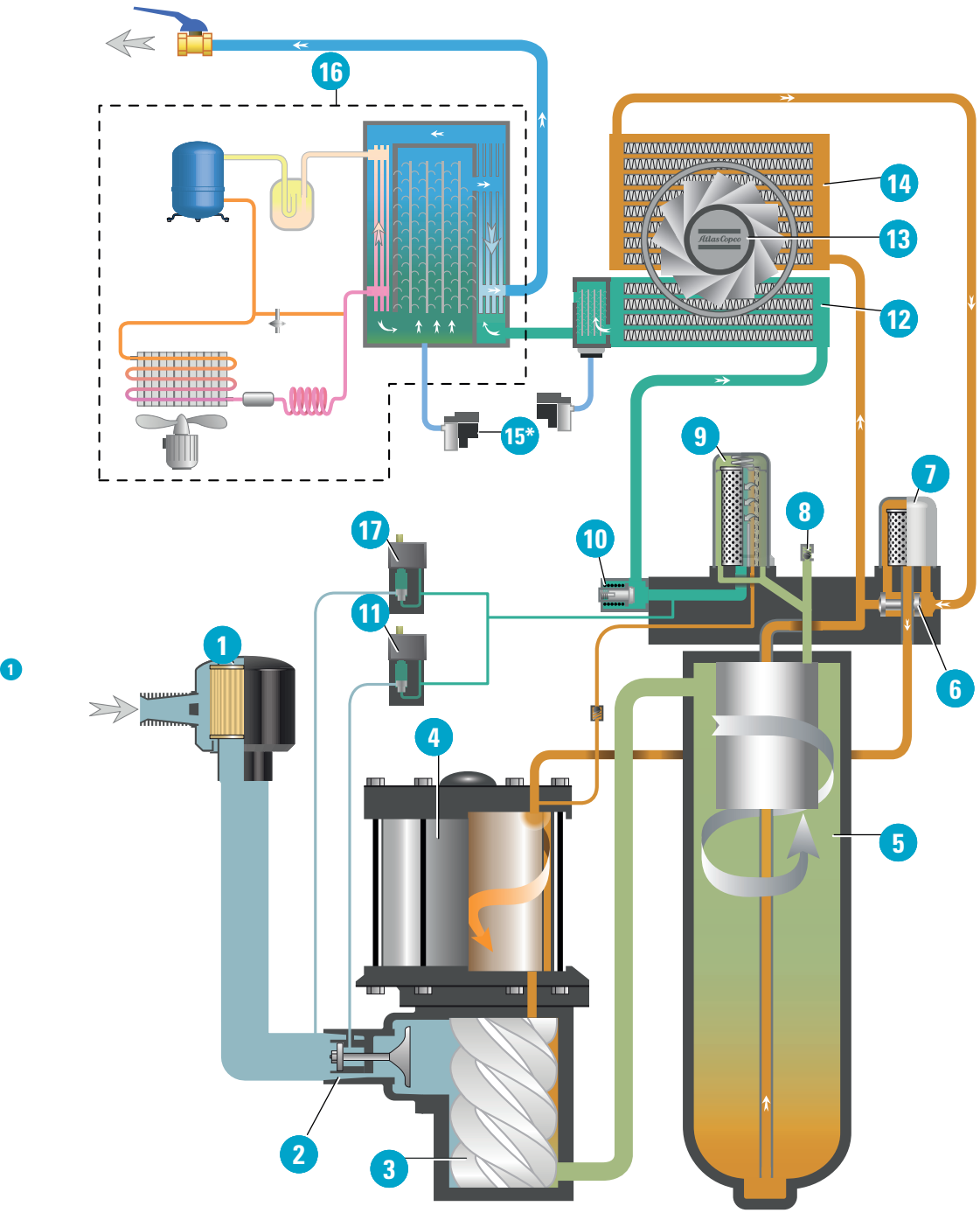
FAD is measured at the following effective working pressures:
- 4 bar(e) (GA 18-37 VSD+)
- 5.5 bar(e) (GA 7-15 VSD+)
- 7 bar(e)
- 9.5 bar(e)
- 12.5 bar(e)
Maximum working pressure: 13 bar(e) (188 psig)

Options

Energy recovery	DD+ filter
Dryer bypass	FoodGrade oil
Main switch	Elektronikon connectivity (SmartBox)
Freeze protection	UD+ filter
Heavy duty inlet filter	RXD oil
Pre-filter	ES4i, ES6i
Tropical thermostat	Transformer sales kit 200-230V / 500-575V
IT-ancillaries	

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 7-15 VSD+	630	610	1420	24.80	24.02	55.91	630	985	1420	24.80	38.78	55.91
GA 18-37 VSD+	780	811	1590	30.71	31.93	62.60	780	1273	1590	30.71	50.12	62.60

FLOW CHART GA 7-37 VSD+



1. Inlet filter
2. Sentinel valve
3. Screw element
4. Interior permanent magnet motor (iPM)
5. Air/oil vessel separator
6. Thermostatic bypass valve
7. Oil filter
8. Safety valve
9. Oil separator
10. Minimum pressure valve
11. Solenoid valve
12. After cooler
13. Fan
14. Oil cooler
15. Electronic drain (* mounted on after-cooler on models without dryer)
16. Dryer (Full Feature option)
17. Condensate prevention cycle

- Wet compressed air
- Condensate
- Dry compressed air
- Intake air
- Air/oil mixture
- Oil

TECHNICAL SPECIFICATIONS GA 37-75 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 37 VSD+	4	58	26-132	94-475	55-280	37	50	67	860	1060
	7	102	26-130	94-468	55-275	37	50	67	860	1060
	9.5	138	25-115	90-414	53-244	37	50	67	860	1060
	12,5	181	38-98	137-353	81-208	37	50	67	860	1060
GA 45 VSD+	4	58	26-157	94-565	55-333	45	60	67	860	1060
	7	102	26-155	94-558	55-328	45	60	67	860	1060
	9.5	138	25-136	90-490	53-288	45	60	67	860	1060
	12.5	181	38-114	137-410	81-242	45	60	67	860	1060
GA 55 VSD+	4	58	26-189	94-680	55-400	55	75	67	900	1100
	7	102	26-188	94-677	55-398	55	75	67	900	1100
	9.5	138	26-166	94-598	55-352	55	75	67	900	1100
	12.5	181	40-140	144-504	85-297	55	75	67	900	1100
GA 75 VSD+	4	58	26-226	94-814	55-479	75	100	70	920	1120
	7	102	27-225	97-810	57-477	75	100	70	920	1120
	9.5	138	27-198	97-713	57-420	75	100	70	920	1120
	12.5	181	41-167	148-601	87-354	75	100	70	920	1120

** Unit performance measured according ISO 1217 ed. 4 2009, annex E, latest edition.*
*** Mean noise level measured at a distance of 1 m 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.

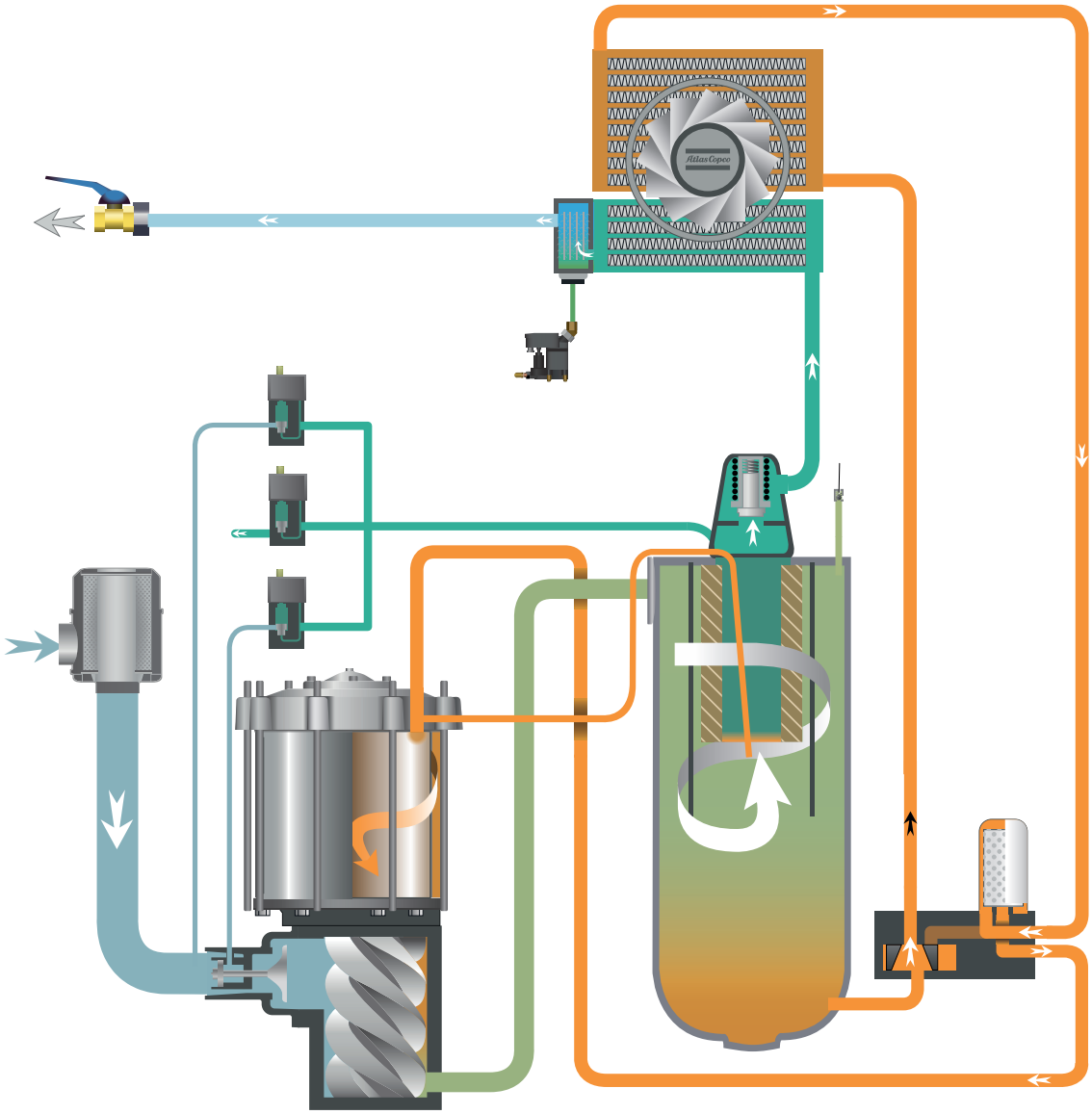
FAD is measured at the following effective working pressures:
- 4 bar(e)
- 7 bar(e)
- 9.5 bar(e)
- 12.5 bar(e)
Maximum working pressure: 13 bar(e) (188 psig)

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 (standard on GA 75 VSD+, optional on GA 37-55 VSD+)

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 37-75 VSD+	1100	1153	1968	43.31	45.39	77.48	1100	1656	1968	43.31	65.20	77.48

FLOW CHART GA 37-75 VSD+



1. Inlet filter
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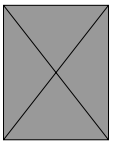
4. Interior permanent magnet motor (iPM)
5. Air/oil vessel separator
6. Thermostatic bypass valve
7. Oil filter
8. Safety valve
9. Minimum pressure valve
10. Solenoid valve
11. After cooler
12. Fan
13. Oil cooler
14. Electronic drain (one drain mounted on after cooler for standard models, for Full Feature models a second drain is mounted on the ID dryer)
15. Condensate prevention cycle

- Wet compressed air
- Condensate
- Dry compressed air
- Intake air
- Air/oil mixture
- Oil

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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