

# OIL-INJECTED ROTARY SCREW COMPRESSORS

GA 90+/GA 110-160/GA 110-160 VSD  
(90-160 kW/125-200 hp)



**Atlas Copco**





## ***OUTSTANDING PERFORMANCE, MAXIMUM BENEFITS***

GA 90+/GA 110-160/GA 110-160 VSD compressors provide high-quality compressed air in the harshest environmental conditions. Incorporating the patented Atlas Copco's oil-injected screw element, they provide a long and trouble-free life at the lowest possible operating cost.



### **Metal industry**

Metal plants use compressed air for instrumentation, plant air and pneumatic conveying for raw materials or ash and are in need of an efficient solution to reduce their operating costs. Thanks to their innovative features, Atlas Copco's GA air compressors meet this demand.

### **Mining industry**

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

### **Power plants**

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

### **General industry**

Many industrial companies use compressed air in their daily operations. Applications include pneumatic tools for cutting, drilling, hammering and grinding; pneumatic actuators and valves; ventilation systems; packing and palleting machinery and conveyor systems. Atlas Copco's GA compressors are designed for ultimate performance and reliability.



## Keeping your production up and running

Atlas Copco's GA compressors ensure long and trouble-free lifetime at the lowest operating cost. At their heart are state-of-the-art compression elements based on innovative asymmetric rotor profiles and powered by a high efficiency electric motor. Combined with a built-to-last drive system and heavy duty air inlet filters, this results in maximum reliability to operate in the toughest conditions and at ambient temperatures up to 55°C/131°F.

## Reducing your production costs

The innovative design of GA compressors reduces your energy bill and overall compressor lifecycle costs. GA compressors are pre-assembled packages: installation is fault-free, commissioning time is low and no external instrumentation air is required.

## Protecting your process

The Full Feature concept includes compressed air and air treatment equipment integrated in the compressor canopy. This limits installation costs and space requirements. The integrated water separator immediately removes 100% of the condensate, resulting in higher air quality.

## Maximizing your savings

As there is no "one size fits all" concept, we have developed a range of features and options to help you optimize the use of your compressor: from running the machine at high temperatures, to extra safety devices.

# SETTING A NEW STANDARD IN THE INDUSTRY

Atlas Copco's GA compressors bring you outstanding sustainability, reliability and performance, while minimizing the total cost of ownership. Built to perform even in the harshest environments, these compressors keep your production running efficiently.



1

## Superior air quality

- Standard integrated water separator to remove 100% of the condensate with electronic drain.
- 3-step efficient oil separation process for low residual oil content in the compressed air (less than 3 ppm).

2

## State-of-the-art screw element

- Patented asymmetric rotor profile for maximum efficiency.
- Bearing selection leads to low wear for increased reliability.

3

## Service friendly

- Selection of long lifetime consumables.
- Easy and safe access to all service parts.

4

## Optimized loading/unloading valve

- Assures constant optimized pressure in the system resulting in high energy savings.
- Smart design with few moving parts for highest reliability.
- Accurate control through solenoid valve.



5

## Triple benefits with the gear driven transmission

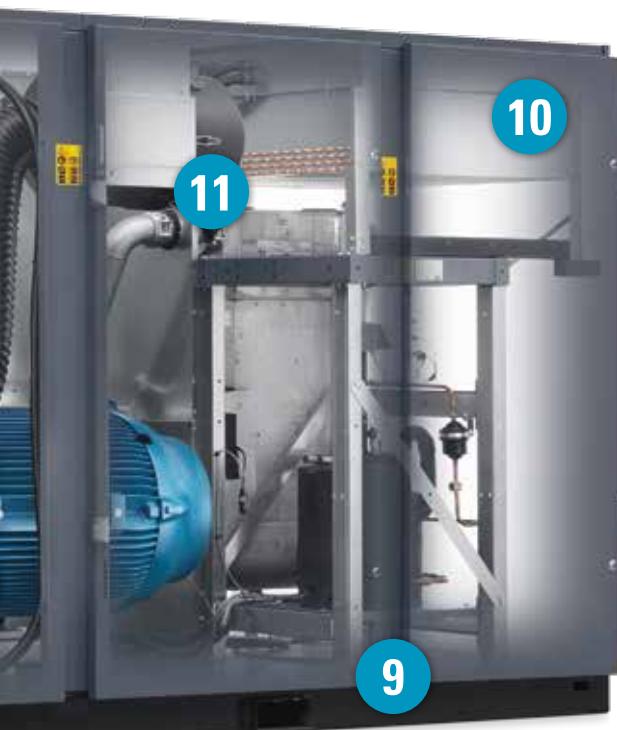
- Built to last, totally enclosed and protected against dirt and dust.
- High-efficiency drive arrangement; no coupling or slippage losses.
- Coupling to absorb the thrust load and increase the reliability.



**6**

## High efficient motor

- TEFC IP55 motor (Class F insulation B rise) protects against dust and chemicals.
- Continuous operation under severe ambient temperature conditions.

**7**

## Durable design

- Solid metal pipe for durable operation and reduced service costs.
- Rigid straight connections eliminate risk of leaks and improve package efficiency.

**8**

## Cooling module

- Separated oil and after coolers for highest efficiency.
- Standard design up to 46°C/115°F and HAT (55°C/131°F) variant available.
- Cooling fans located in the middle for fresh air in the system to prevent build-up of heat.
- Fans with low noise level.

**9**

## Easy to install

- All inclusive package with flexible ducting possibilities.
- All user connections located on the same side of the compressor.
- Phase sequence relay as standard to protect the compressor against reverse rotation.

**10**

## Integrated refrigerant dryer

- Highly efficient dryer to increase the savings.
- Reduced floor space requirements.
- Optimized operation with the Elektronikon® unit controller.

**11**

## Heavy duty air intake filter

- Protects the compressor components by removing 99.9% of dirt particles down to 3 microns.
- Reduces the dust load in the fine filter, doubling the filter element lifetime without reducing filter efficiency.



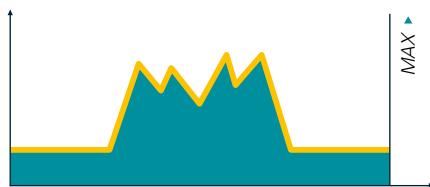
# VSD: DRIVING DOWN YOUR ENERGY COSTS

Over 70% 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 has pioneered Variable Speed Drive (VSD) technology for several decades. VSD leads to major energy savings, reducing the consumption of energy producing fuels and 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.

## What is VSD technology?

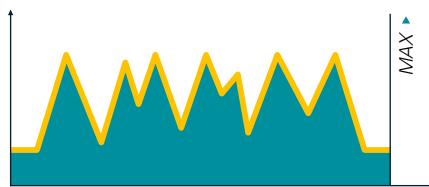
In almost every production environment, air demand fluctuates depending on different factors (time of the day, week or even month). Extensive measurements and studies of compressed air demand profiles show that many compressors have substantial variations in air demand. Only 8% of all installations have a more stable air demand. Tests prove that, even in this case, VSD compressors save energy.

**Profile 1**



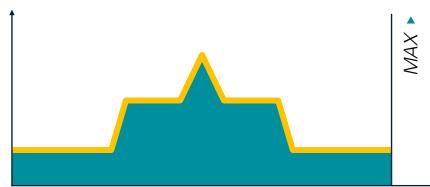
- 64% of all installations.
- Factory working 24 hrs/day: low demand at night & high demand during the day.

**Profile 2**

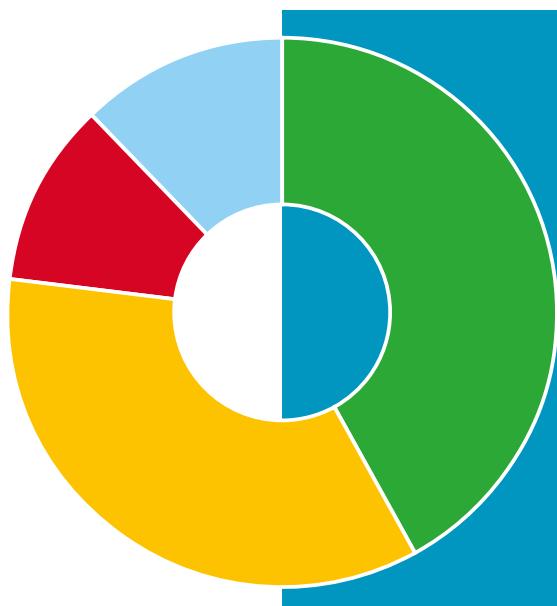


- 28% of all installations.
- Factory working 2 shifts/day, no weekend work: erratically varying air demand.

**Profile 3**



- 8% of all installations.
- Factory working 2 shifts/day, no weekend work: typical 'fixed' speed application.



## Energy savings on average up to 35%

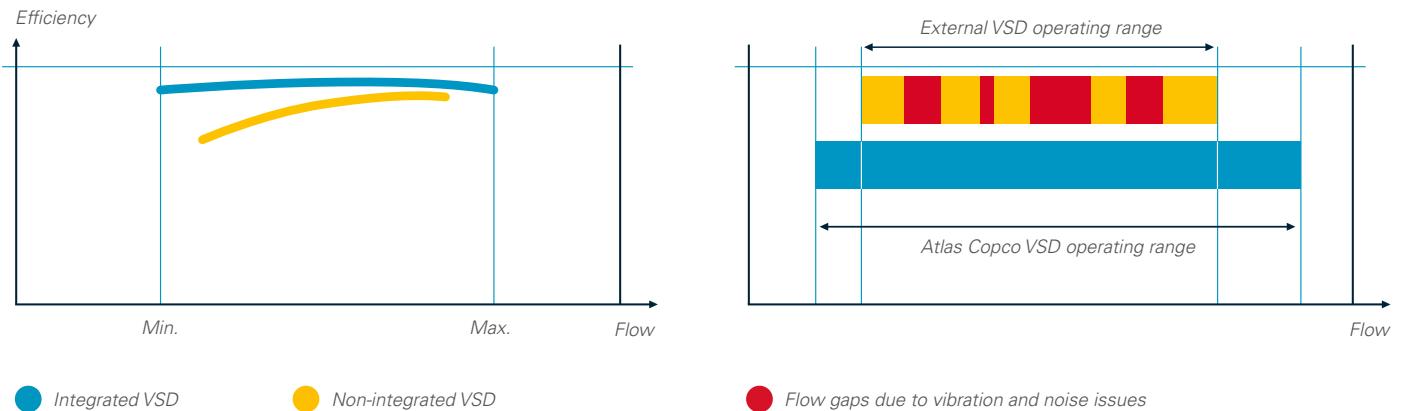
Atlas Copco's VSD technology closely follows the air demand by automatically adjusting the motor speed. This results in large energy savings of up to 35%. The Life Cycle Cost of a compressor can be cut by an average of 22%. In addition, lowered system pressure with VSD minimizes energy use across your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

## Total compressor lifecycle cost

- Energy
- Energy savings with VSD

- Investment
- Maintenance

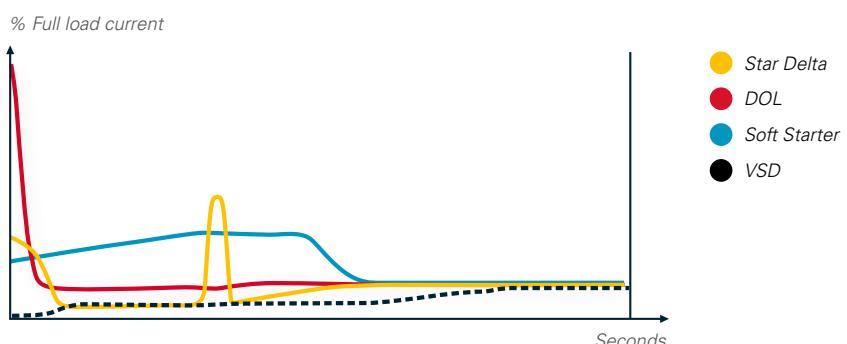
# WHAT IS UNIQUE ABOUT THE INTEGRATED ATLAS COPCO GA VSD?



- 1 The Elektronikon® unit controller manages both the compressor and the integrated converter, ensuring maximum machine **safety** within parameters.
- 2 Flexible pressure selection from 4 to 13 bar with electronic gearing reduces electricity costs.
- 3 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 GAVSD 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 cool overpressure cubicle ensures **stable operation in high ambient temperatures up to 50°C/122°F** (standard up to 46°C/114.8°F).
- 8 It is important to ensure that when using a Variable Speed Drive vibration and noise issues do not occur. Atlas Copco compressors are designed and tested to guarantee they **operate across the entire frequency range of operation**. When an external VSD drive is used it may become necessary to limit the operating range of the compressor, leading to reduced energy saving and jeopardizing stable air network pressure.
- 9 The cubicle cooling booster **increases the lifetime** of electrical components due to a cool cubicle in overpressure and reduced dust ingress.
- 10 Net pressure band is maintained within 0.10 bar, 1.5 psi.

## No current peaks



# INCREASE YOUR SAVINGS WITH ENERGY RECOVERY

The Kyoto directives and the continuing depletion of traditional energy sources mean that businesses throughout the world are making commitments to significantly reduce overall energy consumption. Through innovative products and solutions, Atlas Copco helps you achieve your goals in this area. When it comes to compressed air production – where energy costs can constitute 70% of total lifecycle costs – saving energy can also lead to substantial cost savings.

## Integrated heat exchanger

Air compression creates heat that is normally wasted in the coolers. Energy recovery systems designed by Atlas Copco enable the recovery of most of this heat. Recovery of energy from the shaft input of the compressor can be up to 94% of the compressor shaft power. The heat is directly usable as a source of energy in the form of hot water (85-90°C/185- 194°F). The main module of the recovery system is built into the compressor. The investment needed to link the hot oil circuit from the compressor to the existing water circuit is relatively modest and the time needed before seeing payback from your investment is generally very short.



## Warm air heat recovery

The ducting on your GA compressors also constitutes a simple and smart solution to generate space heating. Ducting simply directs the warmed cooling air to where it is needed – such as workshops, storage warehouses or other facilities. To cope with seasonal changes, louver flaps can be used to vent the warm air to the outside. An installation with motorized and thermostatically controlled louvers is the ideal solution to accurately monitor the temperature with a full control of the flow of heating air.

### Applications:

- Heating of facilities, warehouses or workshops.
- Drying air for painting and washing applications.

# PROTECT YOUR PRODUCTION WITH THE GA FF

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

## All-in-one quality air production

The GA FF (Full Feature) is a ready-to-use, compact package that guarantees a pressure dewpoint of 3°C/37°F (100% relative humidity at 20°C/68°F). All the wires and pipes are assembled in the factory, so there is no need for additional installation work. The dryers can perform at ambient conditions up to 46°C/115°F.



## Save money and the environment

The unique and patented Saver Cycle Control stops the dryer when the compressor is stopped or in unload mode, drastically reducing power consumption. The dewpoint is continuously monitored and the dryer is re-started when the dewpoint begins to increase.

## Optimized air purity

The optional external filters and integrated refrigerant air dryer efficiently remove moisture, aerosols and dirt particles to protect your investment. This air quality prolongs the life of downstream equipment, increasing efficiency, reducing maintenance requirements and ensuring quality of your final product.

Configure your GA for the air quality you need	ISO Quality Class	Dirt Particle Size	Water Pressure Dew Point	Oil Concentration
GA	3.-4	3 microns	-	3 ppm
GA FF with ID	3.4.4	3 microns	+3°C, 37°F	3 ppm
GA FF with ID & general purpose coalescing filter	2.4.2	1 micron	+3°C, 37°F	0.1 ppm

# MONITORING AND CONTROL: HOW TO GET THE MOST FROM THE LEAST

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

- High resolution color 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 Ethernet based communication.
- Support for 31 different languages, including character based languages.



## Online & mobile monitoring

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



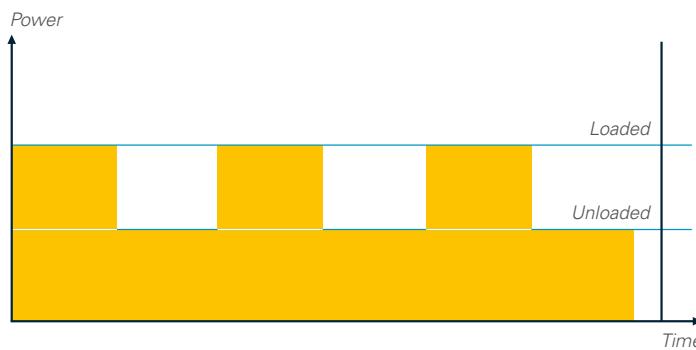
## Full optimization - ES system controller

Improve product quality every minute that your facility is in operation. Atlas Copco's ES system controllers offer a convenient way to achieve optimized performance from your low pressure equipment through a single centralized point of monitoring and control. With the ES system controller watching over your compressors and compressed air network, you will have a highly dependable and energy efficient solution working with your facility to manage operating costs.

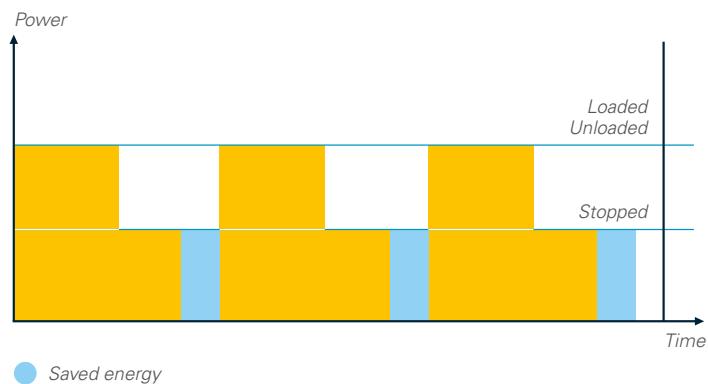
## Dual pressure set-point and Delayed Second Stop

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

### Without DSS



### With DSS



## SMARTLINK\*: Data Monitoring Program

- A remote monitoring system that helps you optimize your compressed air system and save you energy and cost.
- It offers you a complete insight in your compressed air network and anticipates on potential problems by warning you up-front.

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

# OPTIMIZE YOUR SYSTEM

Air circuit	Efficient air inlet filters and flexibles Air intake valve Full load/no load regulation system
Oil circuit	Heavy-duty oil filters Complete oil circuit Air/oil separation system
Cooling circuit	Compressed air aftercooler and oil cooler Stainless steel tube and Shell coolers for water-cooled versions Axial cooling fans for air-cooled versions. Integrated water separator Electronic water drains with no loss of compressed air Complete air, oil, water circuit Roto Xtend duty synthetic lubricant
Electrical components	TEFC IP55 Class F electric motor Starters (Star-Delta) Elektronikon® unit controller Phase sequence relay
Framework	Flexible vibration dampers Silenced canopy Structural skid with no need for foundations Suppression of emissions/harmonic distortions

## ADDITIONAL FEATURES & OPTIONS

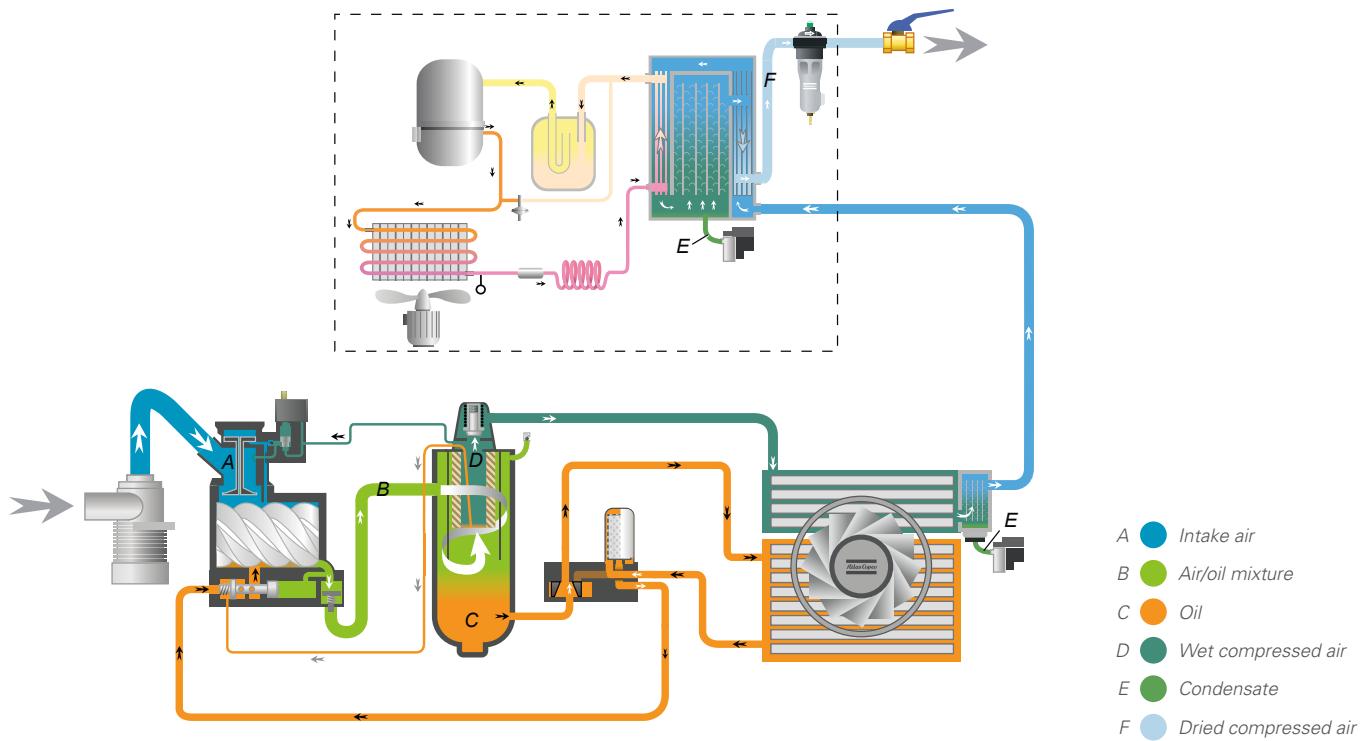
	GA 90*-160	GA 110-160 VSD
Full Feature: integrated ID refrigerant dryer	•	•
High ambient version (up to 55°C/131°F)*	•	•
Integrated Energy Recovery system	•	•
Modulation control	•	-
Full option motor (PT1000 thermal protection and Anti-condensation heaters)	•	-
SPM vibration monitoring system	•	•
Anchor pads	•	•
NPT or ANSI connections	•	•
Performance test certificate	•	•
Witnessed performance test	•	•
Material certificates	•	•
Seaworthy packaging	•	•

\* GA VSD up to 50°C/122°F; GA fix speed Pack up to 55°C/131°F. Not available on Full Feature.

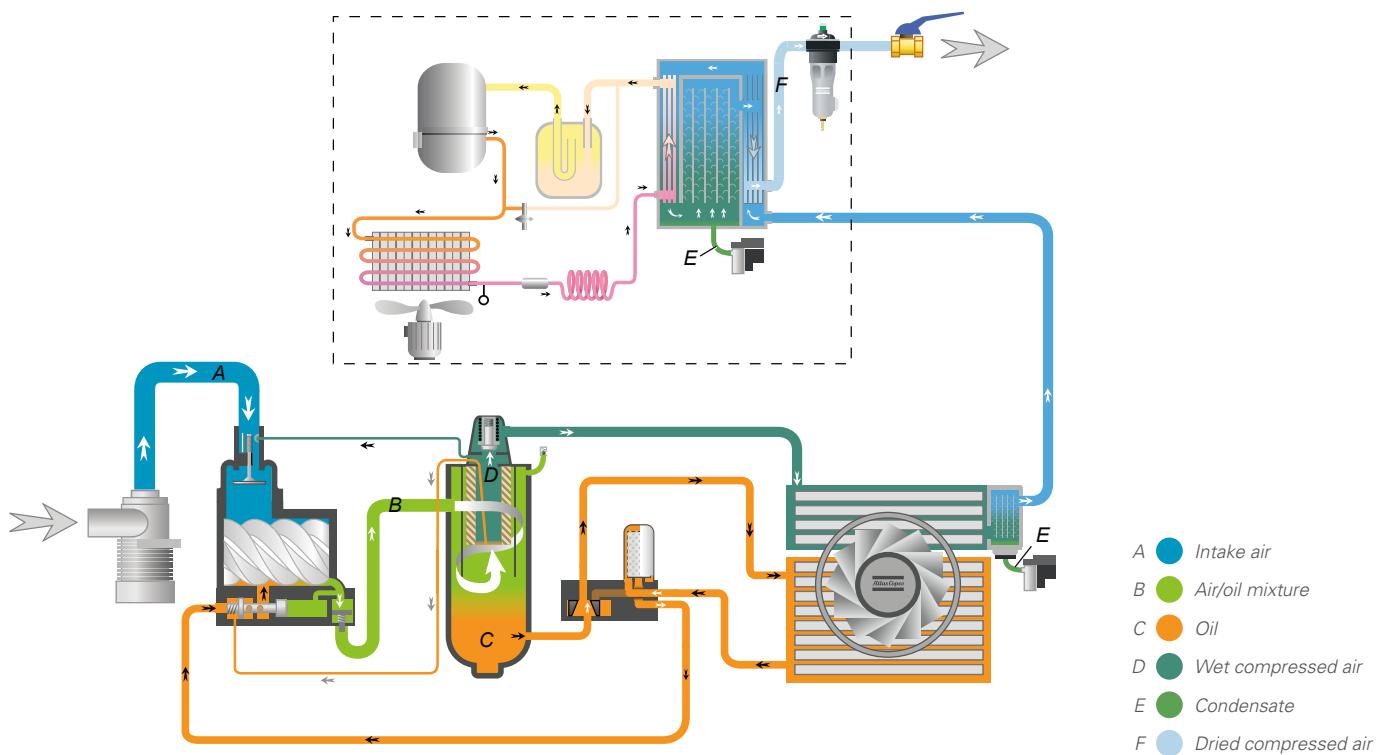
• : Optional - : Not available

# FLOW CHART

## Fixed speed: GA+ & GA



## Variable Speed Drive: GA VSD



# TECHNICAL SPECIFICATIONS 50 Hz

TYPE	Working pressure				Capacity FAD <sup>1</sup>			Installed motor power		Noise level <sup>2</sup>	Weight				
	Standard		Full Feature <sup>3</sup>								Standard		Full Feature		
	bar(e)	psig	bar(e)	psig	l/s	m <sup>3</sup> /min	cfm	kW	hp		kg	lbs	kg	lbs	
GA 90 <sup>+</sup>	5.5	80	5.3	77	330	19.8	699	90	125	70	3000	6614	3393	7480	
	7.5	109	7.3	106	292	17.5	619	90	125	70	3000	6614	3393	7480	
	8.5	123	8.3	120	274	16.4	581	90	125	70	3000	6614	3393	7480	
	10	145	9.8	142	244	14.6	517	90	125	70	3000	6614	3393	7480	
GA 110	5.5	80	5.3	77	401	24.0	850	110	150	70	3100	6834	3493	7701	
	7.5	109	7.3	106	356	21.3	754	110	150	70	3100	6834	3493	7701	
	8.5	123	8.3	120	337	20.2	714	110	150	70	3100	6834	3493	7701	
	10	145	9.8	142	306	18.3	648	110	150	70	3100	6834	3493	7701	
	14	203	13.8	200	245	14.7	519	110	150	70	3100	6834	3493	7701	
GA 132	5.5	80	5.3	77	471	28.2	998	132	175	71	3375	7441	3768	8307	
	7.5	109	7.3	106	424	25.4	898	132	175	71	3375	7441	3768	8307	
	8.5	123	8.3	120	401	24.0	850	132	175	71	3375	7441	3768	8307	
	10	145	9.8	142	368	22.0	780	132	175	71	3375	7441	3768	8307	
	14	203	13.8	200	295	17.7	625	132	175	71	3375	7441	3768	8307	
GA 160	7.5	109	7.3	106	505	30.2	1070	160	215	71	3440	7584	3833	8451	
	8.5	123	8.3	120	480	28.7	1017	160	215	71	3440	7584	3833	8451	
	10	145	9.8	142	443	26.5	939	160	215	71	3440	7584	3833	8451	
	14	203	13.8	200	369	22.1	782	160	215	71	3440	7584	3833	8451	

Type 50 Hz		Working pressure				Capacity FAD <sup>1</sup>			Installed motor power	Noise level <sup>2</sup>	Weight			
		Standard		Full Feature <sup>3</sup>							Standard		Full Feature	
		bar(e)	psig	bar(e)	psig	l/s	m <sup>3</sup> /min	cfm	kW	dB(A)	kg	lbs	kg	lbs
GA 110VSD - 8.5 bar	Minimum	5	72	5	72	128 - 437	7.7 - 26.2	271 - 926	110	70	3375	7441	4015	8851
	Nominal	7	101	7	101	128 - 392	7.7 - 23.5	271 - 831						
	Maximum	8.5	123	8.3	120	128 - 360	7.7 - 21.6	271 - 763						
GA 110VSD - 10 bar	Minimum	6	87	6	87	126 - 411	7.6 - 24.7	267 - 871	110	70	3375	7441	3975	8763
	Nominal	9.5	138	9.5	138	120 - 335	7.2 - 20.1	254 - 710						
	Maximum	10	145	9.8	142	120 - 325	7.2 - 19.5	254 - 689						
GA 110VSD - 14 bar	Minimum	9	131	9	131	121 - 345	7.3 - 20.7	256 - 731	110	70	3375	7441	3950	8708
	Nominal	13.5	196	12.5	181	108 - 266	6.5 - 16.0	229 - 564						
	Maximum	14	203	12.8	185	106 - 258	6.4 - 15.5	225 - 547						
GA 132VSD - 8.5 bar	Minimum	5	72	5	72	128 - 513	7.7 - 30.8	271 - 1087	132	71	3415	7529	4050	8929
	Nominal	7	101	7	101	128 - 465	7.7 - 27.9	271 - 985						
	Maximum	8.5	123	8.3	120	128 - 426	7.7 - 25.6	271 - 903						
GA 132VSD - 10 bar	Minimum	6	87	6	87	126 - 484	7.6 - 29.0	267 - 1026	132	71	3415	7529	4050	8929
	Nominal	9.5	138	9.5	138	120 - 399	7.2 - 23.9	254 - 845						
	Maximum	10	145	9.8	142	120 - 389	7.2 - 23.3	254 - 824						
GA 132VSD - 14 bar	Minimum	9	131	9	131	121 - 410	7.3 - 24.6	256 - 869	132	71	3415	7529	4050	8929
	Nominal	13.5	196	12.5	181	108 - 325	6.5 - 19.5	229 - 689						
	Maximum	14	203	12.8	185	106 - 316	6.4 - 19.0	225 - 670						
GA 160VSD - 8.5 bar	Minimum	5	72	5	72	128 - 570	7.7 - 34.2	271 - 1208	160	71	3515	7749	4155	9160
	Nominal	7	101	7	101	128 - 550	7.7 - 33.0	271 - 1165						
	Maximum	8.5	123	8.3	120	128 - 507	7.7 - 30.4	271 - 1074						
GA 160VSD - 10 bar	Minimum	6	87	6	87	126 - 565	7.6 - 33.9	267 - 1197	160	71	3515	7749	4155	9160
	Nominal	9.5	138	9.5	138	120 - 477	7.2 - 28.6	254 - 1011						
	Maximum	10	145	9.8	142	120 - 466	7.2 - 28.0	254 - 987						
GA 160VSD - 14 bar	Minimum	9	131	9	131	121 - 489	7.3 - 29.3	256 - 1036	160	71	3515	7749	4155	9160
	Nominal	13.5	196	12.5	181	108 - 371	6.5 - 22.3	229 - 786						
	Maximum	14	203	12.8	185	106 - 385	6.4 - 23.1	225 - 816						

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

Reference conditions:

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

(2) A-weighted emission sound pressure level at the work station, L<sub>p</sub> WSA (re 20  $\mu$ Pa) 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:

- 8.5 bar version at 7 bar (Standard & FF)
- 10 bar version at 9.5 bar (Standard & FF)
- 14 bar version at 13.5 bar (Standard) / 12.5 bar (FF)

## DIMENSIONS

Type	Standard						Full Feature					
	L	W	H	L	W	H	L	W	H	L	W	H
GA 90 <sup>+</sup> /GA 110-160 air-cooled & water-cooled	2800	2000	2000	111	79	79	3700	2000	2000	146	79	79
GA 110-160 VSD air-cooled	3200	2000	2347	126	79	92	3800	2002	2347	150	79	92
GA 110-160 VSD water-cooled	3200	1630	2347	126	64	92	3200	1630	2347	126	64	92

# TECHNICAL SPECIFICATIONS 60 Hz

TYPE	Working pressure				Capacity FAD <sup>1</sup>			Installed motor power		Noise level <sup>2</sup>	Weight				
	Standard		Full Feature <sup>3</sup>								Standard		Full Feature		
	bar(e)	psig	bar(e)	psig	l/s	m <sup>3</sup> /min	cfm	kW	hp		kg	lbs	kg	lbs	
GA 90 <sup>+</sup>	5.5	80	5.3	77	343	20.5	727	90	125	70	3000	6614	3393	7480	
	7.4	107	7.2	104	302	18.1	640	90	125	70	3000	6614	3393	7480	
	9.1	132	8.9	129	274	16.4	581	90	125	70	3000	6614	3393	7480	
	10.9	158	10.7	155	239	14.3	506	90	125	70	3000	6614	3393	7480	
GA 110	5.5	80	5.3	77	406	24.3	860	110	150	70	3100	6834	3493	7701	
	7.4	107	7.2	104	363	21.7	769	110	150	70	3100	6834	3493	7701	
	9.1	132	8.9	129	331	19.8	701	110	150	70	3100	6834	3493	7701	
	10.9	158	10.7	155	295	17.7	625	110	150	70	3100	6834	3493	7701	
GA 132	5.5	80	5.3	77	467	28.0	990	132	175	71	3375	7441	3768	8307	
	7.4	107	7.2	104	421	25.2	892	132	175	71	3375	7441	3768	8307	
	9.1	132	8.9	129	385	23.1	816	132	175	71	3375	7441	3768	8307	
	10.9	158	10.7	155	346	20.7	733	132	175	71	3375	7441	3768	8307	
GA 160	5.5	80	5.3	77	475	28.4	1006	160	215	71	3440	7584	3833	8451	
	7.4	107	7.2	104	437	26.2	926	160	215	71	3440	7584	3833	8451	
	9.1	132	8.9	129	397	23.8	841	160	215	71	3440	7584	3833	8451	
	10.9	158	10.7	155	337	20.2	714	160	215	71	3440	7584	3833	8451	

Type 60 Hz		Working pressure				Capacity FAD <sup>1</sup>			Installed motor power	Noise level <sup>2</sup>	Weight			
		Standard		Full Feature <sup>3</sup>							Standard		Full Feature	
		bar(e)	psig	bar(e)	psig	l/s	m <sup>3</sup> /min	cfm	kW	dB(A)	kg	lbs	kg	lbs
GA 110 VSD - 8,6 bar (125 psi)	Minimum	5	72	5	72	128 - 437	7.7 - 26,2	271 - 926	110	70	3375	7441	4015	8851
	Nominal	6.9	100	6.9	100	128 - 392	7.7 - 23,5	271 - 831						
	Maximum	9.1	132	8.9	129	128 - 350	7.7 - 21,0	271 - 742						
GA 110 VSD - 10,4 bar (150 psi)	Minimum	6	87	6	87	126 - 411	7.6 - 24,7	267 - 871	110	70	3375	7441	3975	8763
	Nominal	10.4	151	10.4	151	120 - 318	7.2 - 19,1	254 - 674						
	Maximum	10.9	158	10.7	155	120 - 308	7.2 - 18,5	254 - 653						
GA 110 VSD - 13,8 bar (200 psi)	Minimum	9	131	9	131	121 - 345	7.3 - 20,7	256 - 731	110	70	3375	7441	3950	8708
	Nominal	13.5	196	12.5	181	108 - 266	6.5 - 16,0	229 - 564						
	Maximum	14	203	12.8	185	106 - 258	6.4 - 15,5	225 - 547						
GA 132 VSD - 8,6 bar (125 psi)	Minimum	5	72	5	72	128 - 513	7.7 - 30,8	271 - 1087	132	71	3415	7529	4050	8929
	Nominal	6.9	100	6.9	100	128 - 465	7.7 - 27,9	271 - 985						
	Maximum	9.1	132	8.9	129	128 - 415	7.7 - 24,9	271 - 879						
GA 132 VSD - 10,4 bar (150 psi)	Minimum	6	87	6	87	126 - 484	7.6 - 29,0	267 - 1026	132	71	3415	7529	4050	8929
	Nominal	10.4	151	10.4	151	120 - 380	7.2 - 22,8	254 - 805						
	Maximum	10.9	158	10.7	155	120 - 370	7.2 - 22,2	254 - 784						
GA 132 VSD - 13,8 bar (200 psi)	Minimum	9	131	9	131	121 - 410	7.3 - 24,6	256 - 869	132	71	3415	7529	4050	8929
	Nominal	13.5	196	12.5	181	108 - 325	6.5 - 19,5	229 - 689						
	Maximum	14	203	12.8	185	106 - 316	6.4 - 19,0	225 - 670						
GA 160 VSD - 8,6 bar (125 psi)	Minimum	5	72	5	72	128 - 570	7.7 - 34,2	271 - 1208	160	71	3515	7749	4155	9160
	Nominal	6.9	100	6.9	100	128 - 550	7.7 - 33,0	271 - 1165						
	Maximum	9.1	132	8.9	129	128 - 495	7.7 - 29,7	271 - 1049						
GA 160 VSD - 10,4 bar (150 psi)	Minimum	6	87	6	87	126 - 565	7.6 - 33,9	267 - 1197	160	71	3515	7749	4155	9160
	Nominal	10.4	151	10.4	151	120 - 456	7.2 - 27,4	254 - 966						
	Maximum	10.9	158	10.7	155	120 - 444	7.2 - 26,6	254 - 941						
GA 160 VSD - 1 3,8 bar (200 psi)	Minimum	9	131	9	131	121 - 489	7.3 - 29,3	256 - 1036	160	71	3515	7749	4155	9160
	Nominal	13.5	196	12.5	181	108 - 371	6.5 - 22,3	229 - 786						
	Maximum	14	203	12.8	185	106 - 385	6.4 - 23,1	225 - 816						

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

Reference conditions:

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

(2) A-weighted emission sound pressure level at the work station, L<sub>p</sub> 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:

- 125 psi version at 100 psi (Standard & FF)
- 150 psi version at 150 psi (Standard & FF)
- 200 psi version at 196 psi (Standard) / 181 psi (FF)

## DIMENSIONS

TYPE	Standard						Full Feature					
	L	W	H	L	W	H	L	W	H	L	W	H
GA 90 <sup>+</sup> /GA 110-160 air-cooled & water-cooled	2800	2000	2000	111	79	79	3700	2000	2000	146	79	79
GA 110-160 VSD air-cooled	3200	2000	2347	126	79	92	3800	2002	2347	150	79	92
GA 110-160 VSD water-cooled	3200	1630	2347	126	64	92	3200	1630	2347	126	64	92

## **COMMITTED TO SUSTAINABLE PRODUCTIVITY**

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