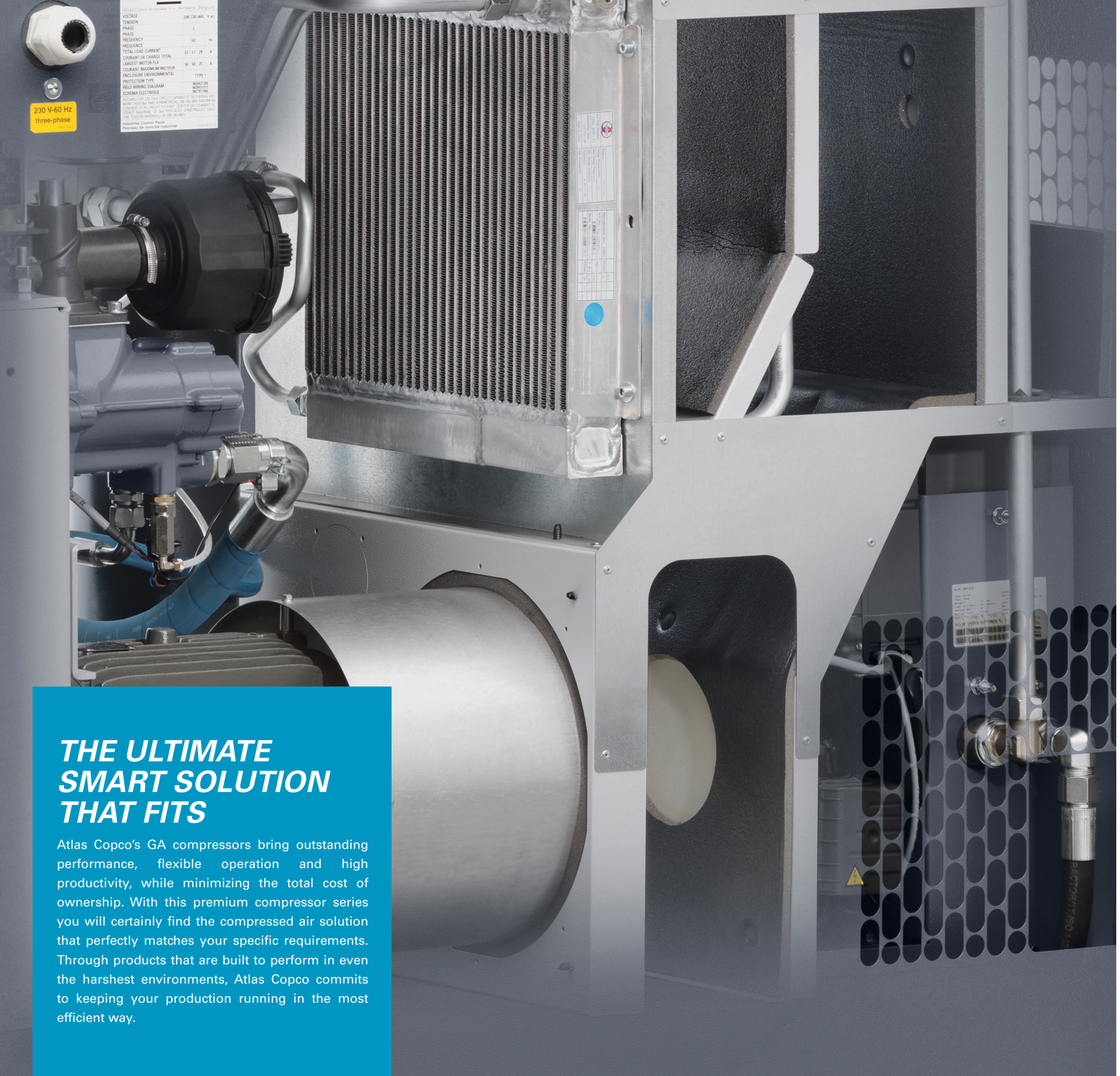
# OIL-INJECTED ROTARY SCREW COMPRESSORS

GA 5-11 (5,5-11 kW/7,5-15 hp)


Atlas Copco




# *THE ULTIMATE SMART SOLUTION THAT FITS*

Atlas Copco's GA compressors bring outstanding performance, flexible operation and high productivity, while minimizing the total cost of ownership. With this premium compressor series you will certainly find the compressed air solution that perfectly matches your specific requirements. Through products that are built to perform in even the harshest environments, Atlas Copco commits to keeping your production running in the most efficient way.

## Highest reliability

The GA series is designed, manufactured and tested in accordance with ISO 9001, ISO 14001 and ISO 1217, Ed. 4, Annex C/E. Ensuring a long and trouble-free life at the lowest operating cost, the GA contains the latest generation of Atlas Copco's innovative oil-injected screw element.

## Minimized energy costs

Energy can represent over 80% of a compressor's life cycle costs (LCC). The generation of compressed air can even account for more than 40% of a plant's total electricity bill. Through the use of Atlas Copco's highly efficient element and state-of-the-art packaging, GA compressors can minimize energy costs and the overall compressor life cycle costs.

## Air system integration

The GA WorkPlace Air System can be installed close to the point of use thanks to its low noise operation. In addition, as air treatment equipment is integrated and the tank is mounted under the compressor, the need for a separate compressor room is eliminated. Moreover, all compressors are delivered ready for use, reducing installation costs to a minimum.

# GA 5-11: THE PREMIUM SOLUTION

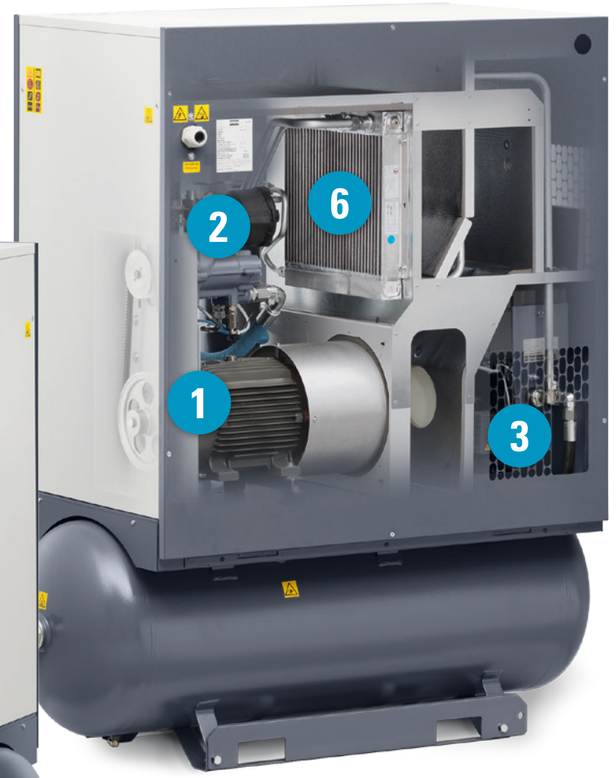
Able to tackle extreme duties as daily challenges, Atlas Copco's high-performance tank mounted GA compressors beat any workshop solution. Ready to supply high-quality air, they keep the air network clean and your production up and running.

## 5
## High tech oil vessel

- Protection from oil contamination: extremely low oil carry-over thanks to the vertical design of the oil vessel.
- Extremely low losses of compressed air during load/unload cycle thanks to minimized oil vessel size.

## 1
## Optimized drive train

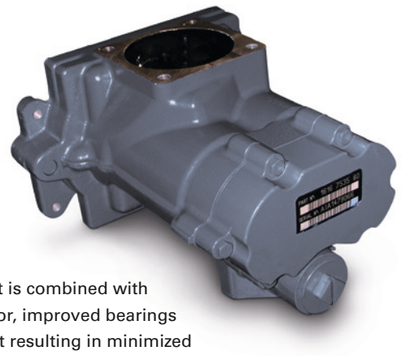
Unequaled reliability during the system's lifetime thanks to the belt-driven drive train developed in accordance with the highest industry standards.





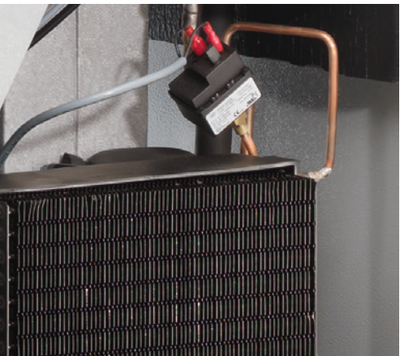
## 4
## Elektronikon® controller

- Web based online compressor status viewer on new Elektronikon® for remote monitoring using a standard Ethernet connection.
- The Elektronikon®'s monitoring features include new service and warning indications, error detection and compressor shut-down. The optional Elektronikon® graphic controller provides further enhanced visual service indications and warnings.



## 2
## Time proven element

- The GA 5-11's compression element is combined with an IE3 efficiency motor, improved bearings and seal arrangement resulting in minimized energy costs.
- Fit for environments with ambient temperatures up to 46°C due to superior component design.
- The Free Air Delivery is increased up to 8% and power consumption is reduced by 7% thanks to optimized packaging and the state-of-the-art compressor element.



## 3
## Integrated quality air solutions

- Protection of downstream air equipment in all working conditions: the integrated dryer avoids condensation and corrosion in the network.
- Additional energy savings with the dryer's no-loss electronic drain.
- Optional filters can be added to obtain air quality up to class 1 level (<0.01 ppm).
- Water separator included as standard.

## 6
## Easy installation & servicing

- A true plug-and-play solution ready to be installed close to the point of use.
- Optionally, the system can be expanded with an integrated dryer, air filters and a factory mounted 270L receiver (optional 500L).
- Effortless transportation by forklift.
- Standard equipped with a 3 meter power supply cable.
- Minimized service costs thanks to high-quality and easily replaceable consumables with a long lifetime and easy servicing.

# A STEP AHEAD IN MONITORING AND CONTROLS

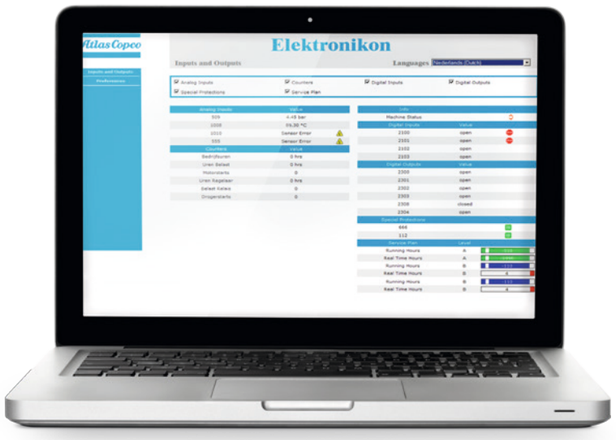
The next-generation Elektronikon® operating system offers a great variety of control and monitoring features to increase efficiency and reliability. The Elektronikon® controls the main drive motor and regulates system pressure within a predefined and narrow pressure band.


## Elektronikon® controller

- Improved ease of use: intuitive navigation system with clear pictograms and extra 4th LED indicator for service.
- Free online compressor status visualization through a web browser using a standard Ethernet connection.
- Easy to upgrade.
- Maximum reliability: more durable keyboard.

## Key features

- Automatic restart after voltage failure.
- Dual pressure set point.
- Delayed Second Stop function.
- Option to upgrade to the advanced Elektronikon® graphic controller.




## Free online visualization

Monitor your compressors over the Ethernet with the new Elektronikon® controllers. Monitoring features include warning indications, compressor shut-down and maintenance scheduling, all possible with the free online compressor status visualization. SMS service, trending and remote history events are optional through the connectivity program.

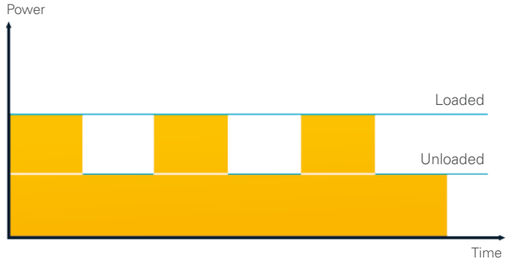
## Optional integrated compressor controller

To reduce system pressure and energy consumption in installations of up to 4 (ES4i) or 6 (ES6i) compressors, the optional integrated compressor controller can be installed with a simple license.

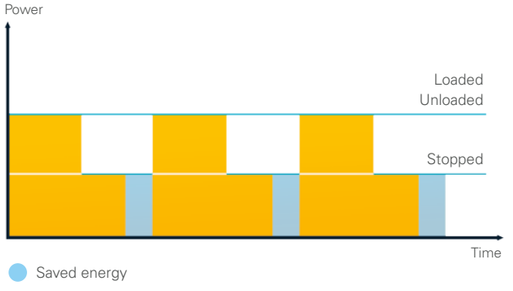
## Dual pressure set point & delayed second stop

The production process creates fluctuating levels of demand which can cause energy losses in low use periods. The Elektronikon® 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 at a minimum.

### Without DSS




### With DSS




## Saver cycle

Saver cycle technology reduces energy consumption. The Elektronikon® is linked to both saver cycles: fan and dryer. Monitoring the oil temperature, the fan saver cycle regulates the fan and minimizes energy use. Using an ambient sensor to monitor the required dew point suppression, the dryer saver cycle starts and stops the dryer when the compressor has stopped, minimizing energy use and protecting the air system from corrosion.

# EXCELLENCE IN QUALITY AIR

Untreated compressed air contains moisture, aerosols and dirt particles that can damage your air system and contaminate your end product. The resulting maintenance costs can far exceed air treatment costs. Our compressors provide the clean, dry air that improves your system's reliability, avoiding costly downtime and production delays, and safeguarding the quality of your products. Clean, treated air also reduces the risk of corrosion and leaks in your compressed air system, leading to substantial cost savings. Furthermore, with leaks and energy waste minimized and the unsafe disposal of untreated condensate eliminated, you can protect the environment and conform to stringent international regulations.

## Savings features

On average 30% energy savings with new range of integrated dryers

- Global warming potential has been reduced significantly by an average of 50% by reducing the amount of refrigerant in the new dryer.
- Use of energy-efficient refrigerant R134a reduces operating costs.
- Environmentally friendly characteristics.
- Unique Saver Cycle Control, with ambient temperature sensor and based on dryer load and relative humidity of compressed air, saves energy at partial load.
- Low pressure drop heat exchanger with integrated water separator.
- Zero waste of compressed air thanks to no-loss condensate drain.
- Pressure dew point of 3°C (100% relative humidity at 20°C).


| ISO quality class* | Dirt particle size | Water pressure dew point** | Oil concentration |
|---|---|---|---|
| 3.-.4 | 3 microns | - | 2 ppm |
| 3.4.4 | 3 microns | +3°C, 37°F | 2 ppm |
| 2.4.2 | 1 micron | +3°C, 37°F | 0.1 ppm |
| 1.4.1 | 0.01 microns | +3°C, 37°F | 0.01 ppm |

**The table values are maximum limits according to the respective ISO quality class.*
*** Water pressure dew point based on 100% RH at 20°C/68°F.*

# TAILORED TO YOUR NEEDS

Some applications may need or benefit from additional options, more refined control and air treatment systems. To meet these needs, Atlas Copco has developed options and easily integrated compatible equipment providing the lowest cost compressed air.

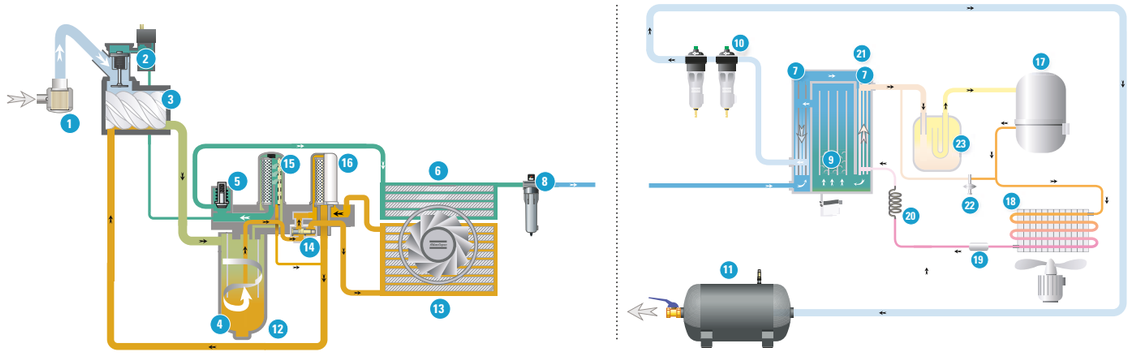
| | GA 5-11 |
|---|---|
| Integrated filter kit class 1 | • |
| Integrated filter kit class 2 | • |
| Dryer by-pass | • |
| Integrated oil/water separator (OSD) | • |
| Electronic water drain (EWD) on pack unit (cooler) | • |
| 500 liter air receiver | • |
| Electronic water drain (EWD) on 500L vessel | • |
| Integrated oil/water separator OSD | • |
| Phase sequence relay | • |
| Tropical thermostat | • |
| Freeze protection | • |
| Heavy duty inlet filter | • |
| Rain protection | • |
| Main power isolator switch | • |
| Upgrade Elektronikon® graphic | • |
| Relays for ES 100 sequence selector | • |
| Roto–Xtend duty oil | • |
| Central Control license 4 (ES 4i) or 6 (ES 6i) machines on Elektronikon® graphic | • |
| Modulating control | • |
| High ambient temperature versions | • |
| Food-grade oil | • |
| Dryer Saver Cycle | • |
| Compressor inlet Pre-filter | • |
| Motor space heater + thermistors | • |

√ : *Standard* • : *Optional* - : *Not available*

## Energy-saving contributors

- Saver Cycle Control
- Heat exchanger no-loss condensate drain
- Energy-efficient refrigerant
- Low pressure drop

# FLOW CHART




- Intake air
- Air/oil mixture
- Oil
- Compressed air without free water
- Wet compressed air
- Dry compressed air
- Water
- Refrigerant gas/liquid mixture
- High pressure, hot refrigerant gas
- Low pressure, cool refrigerant gas
- High pressure refrigerant liquid
- Low pressure refrigerant liquid

## Air flow

1. Air intake filter
2. Air intake valve
3. Compression element
4. Air/oil separator vessel
5. Minimum pressure valve
6. After-cooler
7. Air-air heat exchanger
8. Water separator (pack only)
9. Water separator with drain
10. DD/PD filters
11. Air receiver

## Oil flow

12. Oil
13. Oil cooler
14. Thermostatic bypass valve
15. Oil separator
16. Oil filter

## Refrigerant flow

17. Refrigerant compressor
18. Condenser
19. Liquid refrigerant dryer/filter
20. Capilar
21. Evaporator
22. Hot gas bypass valve
23. Air intake valve

# TECHNICAL SPECIFICATIONS GA 5-7-11

| COMPRESSOR TYPE | | Working pressure WorkPlace | | Capacity FAD* min-max | | | Installed motor power | | Noise level** | Weight (kg) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | WorkPlace | | WorkPlace Full Feature | |
| | | bar(e) | psig | l/s | m³/h | cfm | kW | hp | dB(A) | Floor-mounted | Tank-mounted | Floor-mounted | Tank-mounted |
| 50 Hz VERSION | | | | | | | | | | | | | |
| GA 5 | 7.5 | 7.5 | 109 | 15.0 | 54.0 | 31.7 | 5.5 | 7.5 | 60 | 257 | 317 | 300 | 360 |
| | 8.5 | 8.5 | 123 | 13.2 | 47.5 | 27.9 | 5.5 | 7.5 | 60 | 257 | 317 | 300 | 360 |
| | 10 | 10 | 145 | 11.7 | 42.1 | 24.7 | 5.5 | 7.5 | 60 | 257 | 317 | 300 | 360 |
| | 13 | 13 | 189 | 8.4 | 30.2 | 17.7 | 5.5 | 7.5 | 60 | 257 | 317 | 300 | 360 |
| GA 7 | 7.5 | 7.5 | 109 | 21.8 | 78.5 | 46.0 | 7.5 | 10 | 61 | 270 | 330 | 315 | 375 |
| | 8.5 | 8.5 | 123 | 21.0 | 75.6 | 44.3 | 7.5 | 10 | 61 | 270 | 330 | 315 | 375 |
| | 10 | 10 | 145 | 17.2 | 61.9 | 36.3 | 7.5 | 10 | 61 | 270 | 330 | 315 | 375 |
| | 13 | 13 | 189 | 14.2 | 51.1 | 30.0 | 7.5 | 10 | 61 | 270 | 330 | 315 | 375 |
| GA 11 | 7.5 | 7.5 | 109 | 30.7 | 110.5 | 64.8 | 11 | 15 | 62 | 293 | 353 | 343 | 403 |
| | 8.5 | 8.5 | 123 | 28.3 | 101.9 | 59.7 | 11 | 15 | 62 | 293 | 353 | 343 | 403 |
| | 10 | 10 | 145 | 26.0 | 93.6 | 54.9 | 11 | 15 | 62 | 293 | 353 | 343 | 403 |
| | 13 | 13 | 189 | 22.0 | 79.2 | 46.5 | 11 | 15 | 62 | 293 | 353 | 343 | 403 |

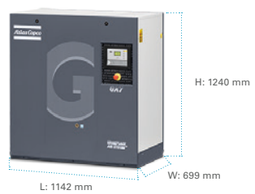
| COMPRESSOR TYPE | | Max. Working pressure WorkPlace | | Capacity FAD* min-max | | | Installed motor power | | Noise level** | Weight (kg) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | WorkPlace | | WorkPlace Full Feature | |
| | | bar(e) | psig | l/s | m³/h | cfm | kW | hp | dB(A) | Floor-mounted | Tank-mounted | Floor-mounted | Tank-mounted |
| 60 Hz VERSION | | | | | | | | | | | | | |
| GA 5 | 100 | 7.4 | 107 | 15.0 | 54.0 | 31.7 | 5.5 | 7.5 | 60 | 257 | 317 | 300 | 360 |
| | 125 | 9.1 | 132 | 13.2 | 47.5 | 27.9 | 5.5 | 7.5 | 60 | 257 | 317 | 300 | 360 |
| | 150 | 10.8 | 157 | 11.7 | 42.1 | 24.7 | 5.5 | 7.5 | 60 | 257 | 317 | 300 | 360 |
| | 175 | 12.5 | 181 | 8.4 | 30.2 | 17.7 | 5.5 | 7.5 | 60 | 257 | 317 | 300 | 360 |
| GA 7 | 100 | 7.4 | 107 | 21.0 | 75.6 | 44.3 | 7.5 | 10 | 61 | 270 | 330 | 315 | 375 |
| | 125 | 9.1 | 132 | 19.9 | 71.7 | 42.0 | 7.5 | 10 | 61 | 270 | 330 | 315 | 375 |
| | 150 | 10.8 | 157 | 17.2 | 61.9 | 36.3 | 7.5 | 10 | 61 | 270 | 330 | 315 | 375 |
| | 175 | 12.5 | 181 | 14.2 | 51.1 | 30.0 | 7.5 | 10 | 61 | 270 | 330 | 315 | 375 |
| GA 11 | 100 | 7.4 | 107 | 30.4 | 109.4 | 64.1 | 11 | 15 | 62 | 293 | 353 | 343 | 403 |
| | 125 | 9.1 | 132 | 27.0 | 97.2 | 57.0 | 11 | 15 | 62 | 293 | 353 | 343 | 403 |
| | 150 | 10.8 | 157 | 24.9 | 89.6 | 52.5 | 11 | 15 | 62 | 293 | 353 | 343 | 403 |
| | 175 | 12.5 | 181 | 22.0 | 79.2 | 46.4 | 11 | 15 | 62 | 293 | 353 | 343 | 403 |

** Unit performance measured according to ISO 1217, Ed. 4, Annex C-2009.*
*** Mean noise level measured at a distance of 1 m according to ISO 2151; 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 working pressures:*
*- 7.5 bar versions at 7 bar(e).*
*- 8.5 bar versions at 8 bar(e).*
*- 10 bar versions at 9.5 bar(e).*
*- 13 bar versions at 12.5 bar(e).*

*GA 5-7-11 pack (floor-mounted)*




Floor-mounted

*GA 5-7-11 pack (tank-mounted)*


Tank-mounted

## *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.

LLOYD'S REGISTER · LRQA
ISO 9001 · ISO 14001
OHSAS 18001

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