Oil-injected rotary screw compressors

Atlas Copco

GA 355-500 (355-500 kW / 450-700 hp)

Outstanding performance

GA 355-500 compressors provide high-quality compressed air in the harshest environmental conditions. Incorporating Atlas Copco's oil-injected screw element, they provide a long and trouble-free life at the lowest possible operating cost.

Metal industry

QUALITY AND EFFICIENCY

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, our GA air compressors meet this demand.

Mining industry

ROBUSTNESS AND RELIABILITY

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

Power plants

SMOOTH AND COST-EFFECTIVE OPERATION

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

General industry

A SAFE AND RELIABLE POWER SOURCE

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 conveyer systems.
GA compressors are designed for ultimate performance and reliability.

Keeping your production up and running

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.

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.

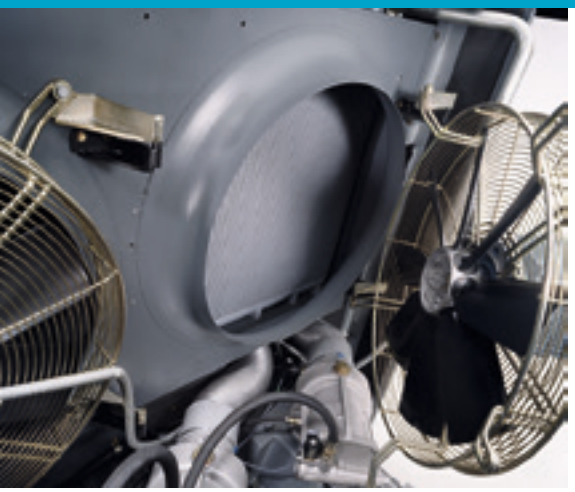
Protecting your process

The 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.

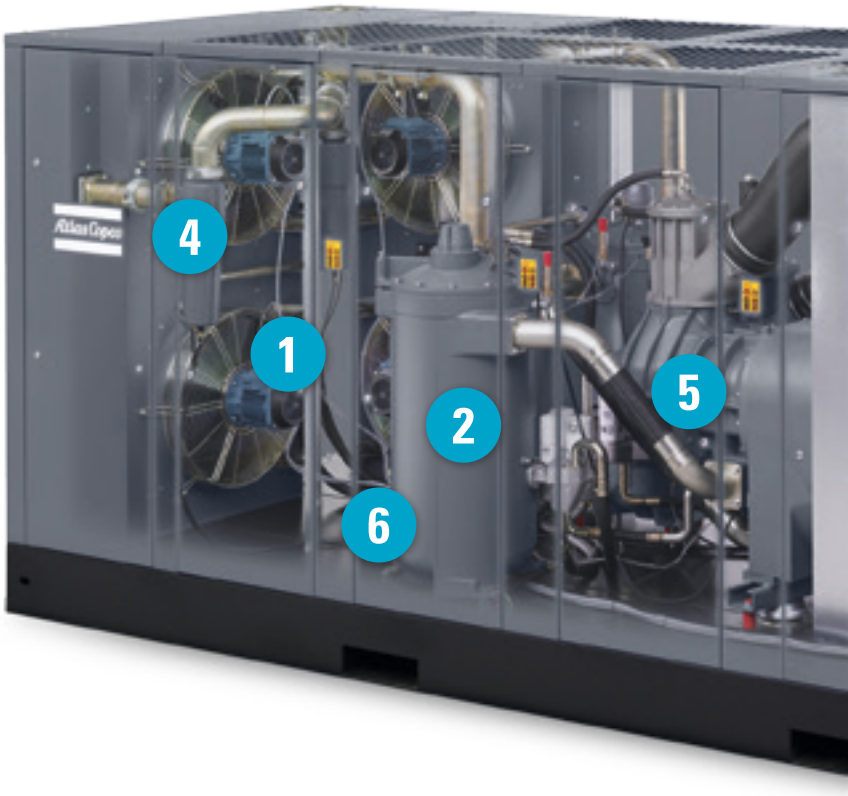
Twin element series for highest efficiency and reliability



1

Practical cooler cleaning

- Hinged fans, fan motors and cowls for easy cooler cleaning.
- Twin fans for optimal cooling.
- Axial cooling fans driven by separate TEFC electric motors (IP55 protection).



2

Superior air quality

- 3-step efficient oil separation process for low residual oil content in the compressed air (less than 3 ppm)
- Hinged cover for easy separator element change

3

Protective air filtration

- Protects the compressor components by removing 99.9% of dirt particles down to 3 microns.
- Extends the system lifetime

7

Elektronikon unit controller

- 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.

6

Energy recovery

- The optional energy recovery system can recover up to 75% of the compressor's shaft power as hot water.
- The main module of the recovery system is integrated in the compressor.
- Recovered hot water can be used as preheated boiler feed water, space heating, showering or other industrial applications.

5

Twin element on single drive & gear casing

- Efficiencies far superior to designs using one large element or 2-stages.
- Extended lifetime due to reduced loads on bearings, rotors and gears.
- Highly efficient motor – TEFC protection (IP55), class F insulation.

4

Moisture separator as standard

A cyclonic moisture separator, with automatic and manual drain, mounted as standard, after the cooler block.

Optimize your system

With the GA 355-500, we provide an all-in-one solution incorporating the latest technology in a built-to-last design. To further optimize the performance of your GA or to simply tailor it to your specific production environment, optional features are available.

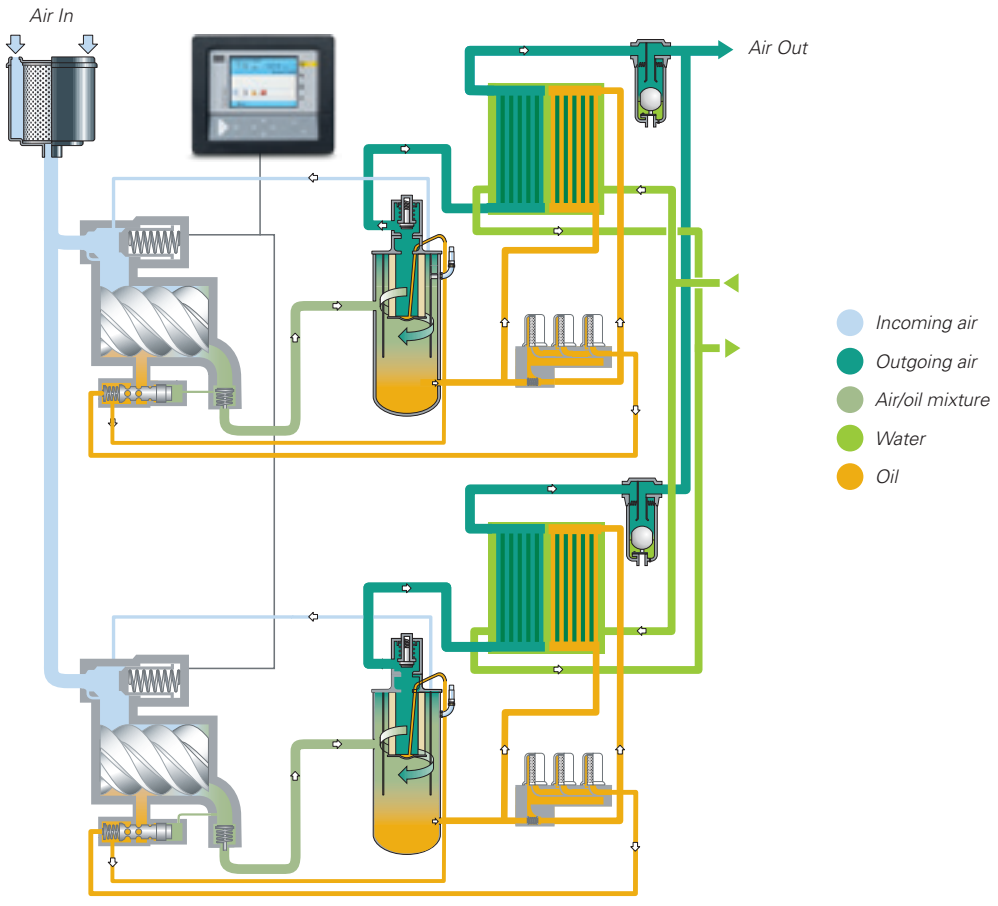
Standard scope of supply

Air circuit	Air intake filter
	Air intake valve
	Air/oil separator
Cooling circuit	Aftercooler/oil cooler (air or water-cooled)
	Cooling fan for air-cooled units
	Ventilation fan for water-cooled units
	Water separators
Oil circuit	Oil filters
General	Complete air/oil/water circuit
	IP55, Class F drive motor
	Built-in electrical starters (on low voltage variants)
	Flexible vibration dampers
	Elektronikon® control system
	Full load/no load regulation system
	Silencing canopy
	Single point inlet and outlet connections
	Structural steel skid - no foundations needed
	SMARTLINK
	Medium voltage motor
	NPT or ANSI connections

Additional features & options

- Energy Recovery (on water-cooled versions only)
- Electronic water drain
- Phase sequence relay
- PT1000 thermal protection for main motor
- Anti-condensate heaters for main motor
- Anchor pads
- Performance test certificate
- Witness test
- Material certificates
- Sea worthy packing
- SPM monitoring
- High short circuit current rating (HSCCR)
- Heavy-duty filter
- Medium voltage motor

GA 355-500 Flow Diagram



Technical specifications

Compressor type	Maximum working pressure		Capacity FAD (1)			Installed motor	Noise level (2), (3)	Weight (3)	
	Pack		Pack						
	bar(e)	psig	l/s	m³/ min	cfm	kW	dB(A)	kg	lb
50 Hz									
GA 355 - 7.5	7.5	109	1050	63.1	2225	355	73	8402	18523
GA 355 - 8.5	8.5	123	969	58.2	2053	355	73	8402	18523
GA 355 - 10	10	145	890	53.5	1886	355	73	8402	18523
GA 355 - 13	13	189	731	43.9	1549	355	73	8402	18523
GA 400 - 7.5	7.5	109	1175	70.6	2490	400	74	8602	18964
GA 400 - 8.5	8.5	123	1109	66.6	2350	400	74	8602	18964
GA 400 - 10	10	145	1011	60.8	2142	400	74	8602	18964
GA 400 - 13	13	189	844	50.7	1788	400	74	8602	18964
GA 450 - 7.5	7.5	109	1298	78.0	2750	450	75	8702	19185
GA 450 - 8.5	8.5	123	1240	74.5	2628	450	75	8702	19185
GA 450 - 10	10	145	1144	68.8	2424	450	75	8702	19185
GA 450 - 13	13	189	960	57.7	2034	450	75	8702	19185
GA 500 - 7.5	7.5	109	1410	84.7	2988	500	76	8202	18082
GA 500 - 8.5	8.5	123	1347	80.9	2854	500	76	8202	18082
GA 500 - 10	10	145	1257	75.5	2664	500	76	8202	18082
GA 500 - 13	13	189	1068	64.2	2263	500	76	8202	18082

GA 500 figures are for medium voltage IP 23 motor.

Reference conditions:
Absolute inlet pressure 1 bar (14.5 psi)
Intake air temperature 20°C (68°F)
Cooling medium temperature 20°C (68°F)

*(1) **Unit performance** measure according to ISO 1217, Annex C, Edition 4 (2009), FAD is measured at the following working pressures:*
- *7.5 bar variants at 7 bar*
- *8.5 bar variants at 8 bar*
- *10 bar variants at 9.5 bar*
- *13 bar variants at 12.5 bar*

*(2) **Noise level***
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) Water-cooled models

Compressor type	Maximum working pressure		Capacity FAD (1)			Installed motor	Noise level (2), (3)	Weight (3)	
	Pack		Pack						
	bar(e)	psig	l/s	m³/ min	cfm	hp	dB(A)	kg	lb
60 Hz									
GA 355-100	7.4	107	1032	62.1	2191	450	73	8102	17862
GA 355-125	9.1	132	940	56.5	1992	450	73	8102	17862
GA 355-150	10.8	157	831	49.9	1761	450	73	8102	17862
GA 355-200	13.8	200	692	41.6	1466	450	73	8102	17862
GA 400-100	7.4	107	1128	67.9	2394	500	74	8202	18082
GA 400-125	9.1	132	1042	62.6	2208	500	74	8202	18082
GA 400-150	10.8	157	935	56.2	1981	500	74	8202	18082
GA 400-200	13.8	200	784	47.1	1661	500	74	8202	18082
GA 450-100	7.4	107	1334	80.4	2835	600	75	8352	18413
GA 450-125	9.1	132	1222	73.4	2589	600	75	8352	18413
GA 450-150	10.8	157	1126	67.7	2386	600	75	8352	18413
GA 450-200	13.8	200	943	56.7	1998	600	75	8352	18413
GA 500-100	7.4	107	1518	91.2	3217	700	76	8002	17641
GA 500-125	9.1	132	1404	84.4	2975	700	76	8002	17641
GA 500-150	10.8	157	1296	77.9	2746	700	76	8002	17641
GA 500-200	13.8	200	1114	66.9	2361	700	76	8002	17641

GA 500 figures are for medium voltage IP 23 motor.

Reference conditions:
Absolute inlet pressure 1 bar (14.5 psi)
Intake air temperature 20°C (68°F)
Cooling medium temperature 20°C (68°F)

*(1) **Unit performance** measure according to ISO 1217, Annex C, Edition 4 (2009), FAD is measured at the following working pressures:*
- *100 psi variants at 100 psi*
- *125 psi variants at 125 psi*
- *150 psi variants at 150 psi*
- *200 psi variants at 193 psi*

*2) **Noise level***
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) Water-cooled models

Compressor type	L		W		H	
	mm	inch	mm	inch	mm	inch
GA 355-500 A (LV and MV-IP23)	5855	230.5	2120	83.5	2500	98.4
GA 355-500 A (MV-IP55)	6055	238.4	2120	83.5	2500	98.4
GA 355-500 W (LV and MV-IP23)	4000	157.5	2120	83.5	2500	98.4
GA 355-500 W (MV-IP55)	4200	165.4	2120	83.5	2500	98.4

A = air-cooled
W = water-cooled

LV = low voltage
MV = medium voltage

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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