



Atlas Copco



## Oil-injected rotary screw compressors

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



## A new standard in compressor efficiency

Atlas Copco's GA 7-75 VSD compressors feature smart drive and intelligent control for unprecedented reliability and efficiency. Variable Speed Drive is integrated as standard, along with an Integrated Permanent Magnet motor and a unique air compressor inverter. As a result, the GA 7-75 VSD reduces energy consumption by an average of at least 35%, setting a new benchmark for cost savings and sustainable performance in the compressor industry.



### Innovative

GA 7-75 VSD compressors are equipped with a leakage-free drivetrain designed by Atlas Copco. It relies on a patented Vacuum Ejector System (VES), which avoids oil leakage in GA 30-75 VSD oil-injected compressors.

### Smart and intelligent

- Unique inverter for air compressors.
- Integrated graphic controller, developed by Atlas Copco, with control logic adapted to fit different operating conditions.
- Modular design with proven performance and efficient material usage.



### Efficient

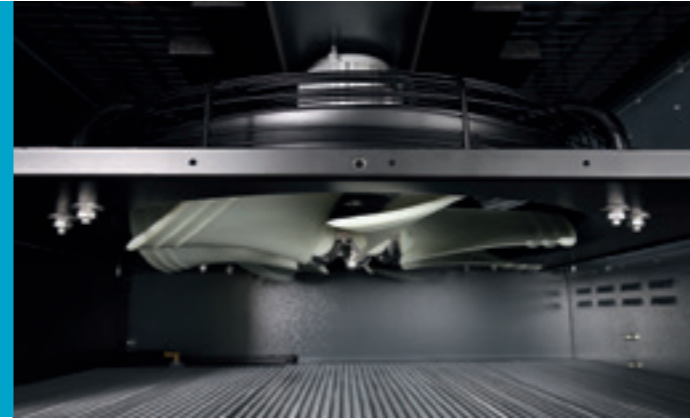
- On average 10% lower Specific Energy Requirement (SER) than fixed speed compressors. Energy consumption is typically reduced by at least 35% compared to an idling compressor.
- Minimized efficiency losses through a direct drive with an permanent magnet motor equalizing IE4.
- Optimized inlet flow at air-end through use of sentinel Valve to minimize pressure and air loss.

### Reliable

- Low maintenance: Vacuum Ejector System (VES) creates a leakage-free system for GA 30 -75 VSD.
- Proven durability with modular design to ensure maximum use of parts.
- W-fin cooler for dependable performance in harsh environments.



# Inside the intelligent, smart GA 7-75 VSD



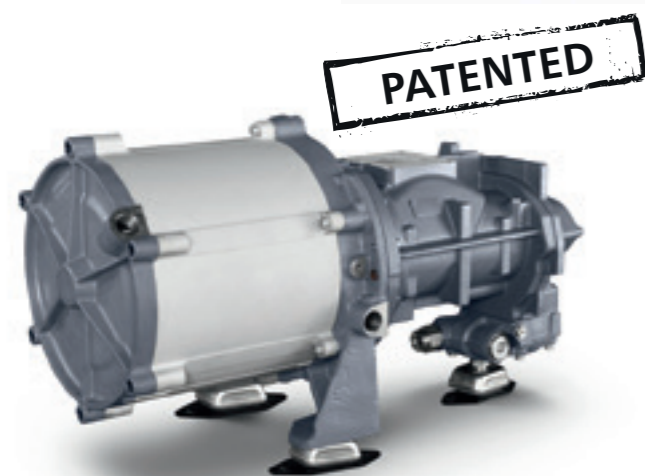
## DRIVE TRAIN

### 1 Interior Permanent Magnet (IPM) motor

- Very high efficiency: equalizing IE4
- Compact, customized design for optimal cooling by oil
- IP55 (for GA 7-22VSD), IP 66 (for GA 30-75VSD)
- No cooling air flow required
- Oil-lubricated motor

### 2 Element

- Made by Atlas Copco
- Robust and silent
- High efficiency



### 3 Direct drive

- No gear or belt efficiency loss
- Compact: footprint down 30%



### 4 W-fin cooling system

- W-fin cooler is dependable in harsh conditions
- Axial fan enhances cooler performance

### 5 Robust oil filter/separator

- Integrated bypass valve with the oil filter
- Easy maintenance

### 6 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

### 7 Unique inverter

- Unique inverter design for air compressors
- Self-adjusting control in abnormal conditions

GA75 VSD



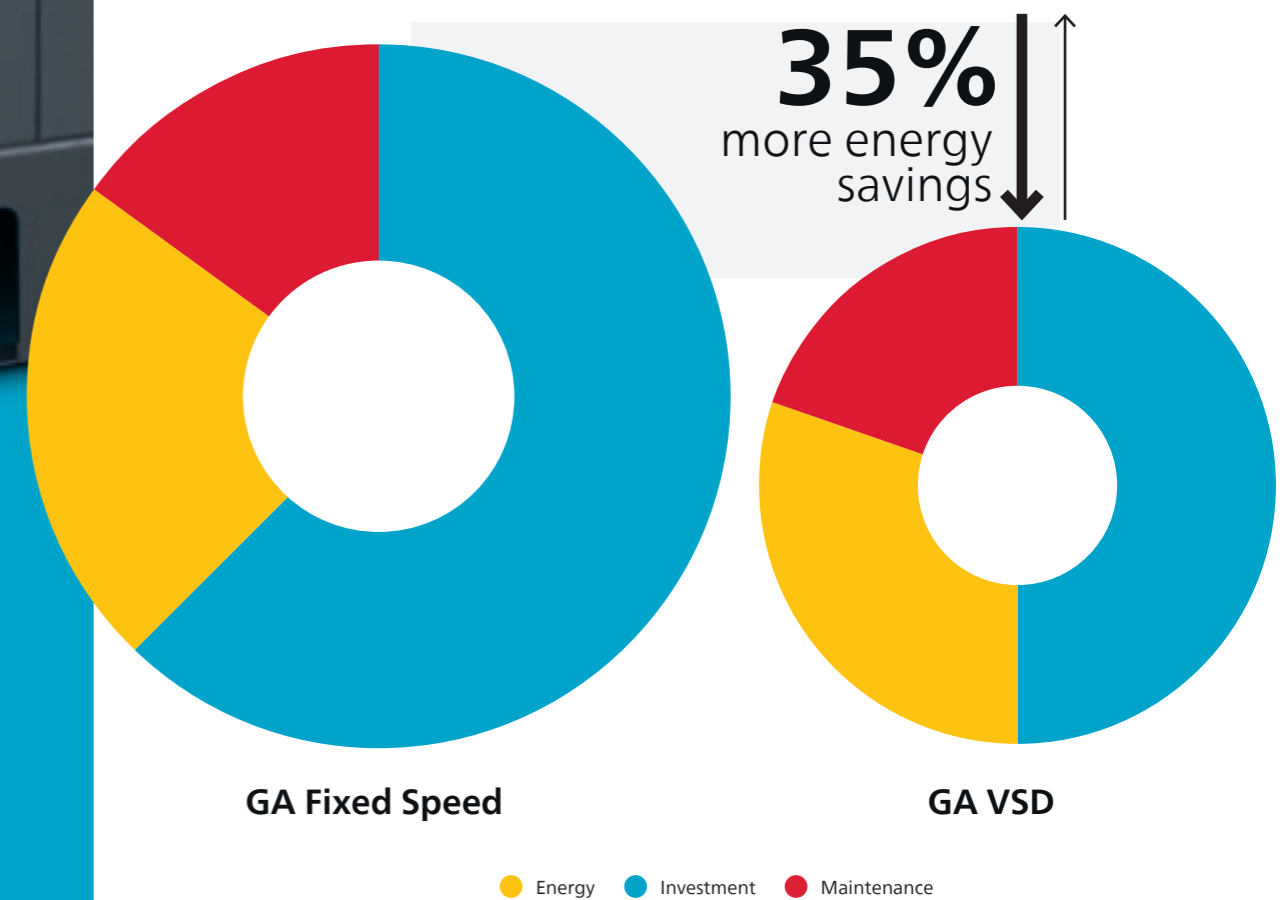
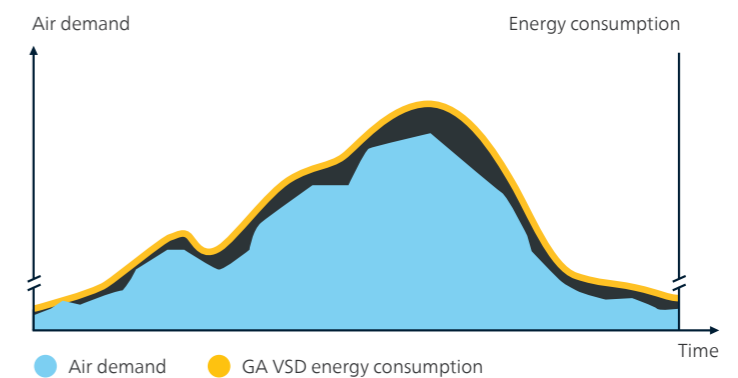
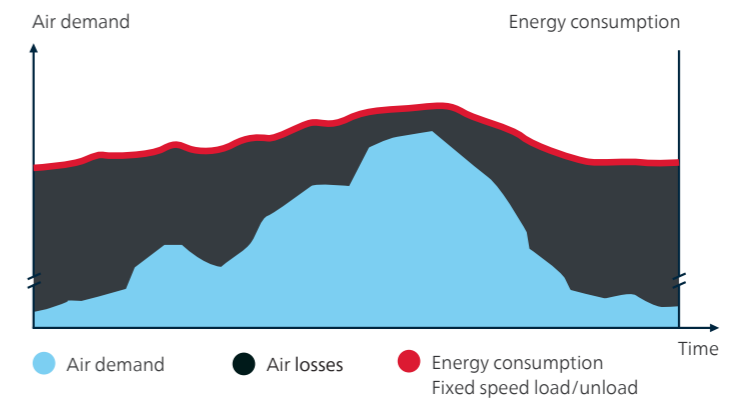
## VSD for more than 35% energy savings

Atlas Copco's GA Variable Speed Drive technology closely matches the air demand by automatically adjusting the motor speed. This results in energy savings of on average 35% compared to load/unload machines

### Why choose Atlas Copco Variable Speed Drive technology?

- On average, more than 35% energy savings with an extensive flow range (25-100% for GA 30-75 VSD)
- Integrated Elektronikon<sup>®</sup> Touch controller controls the motor speed
- Unique NEOS inverter (for GA -75VSD)
- Oil cooled iPM motor means compressor can start/stop under full system pressure without the need to unload
- Eliminates peak current penalty during start-up

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.



## 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

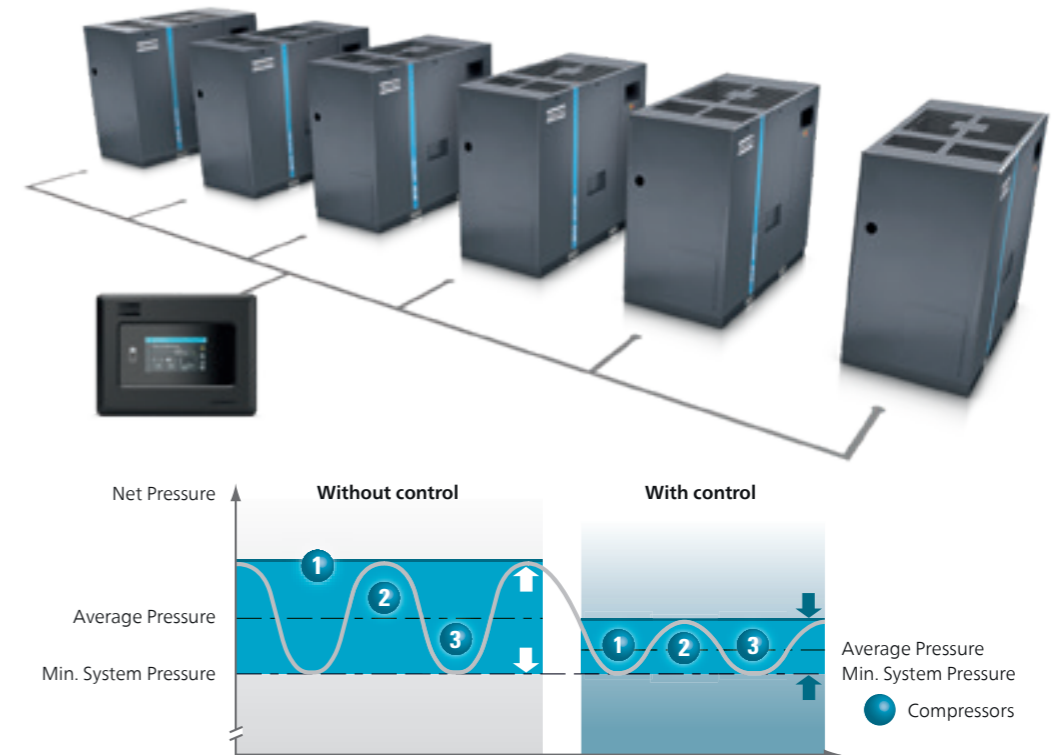
Fan Saver Cycle reduces the energy consumption by switching off the fan in light load applications. Using an ambient sensor to monitor the required dew point suppression, the Elektronikon® starts and stops the dryer, minimizing energy use.

### 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.

## Optional multiple compressor controller

The optional multiple compressor controller gives you easy, centralized control to reduce system pressure and energy consumption. Only one license is required for installations of up to 2 (EQ2i), 4 (EQ4i) or 6 (EQ6i) compressors.



### 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 7-75 VSD

Type	Working pressure		Capacity FAD* (min-max)			Installed motor power		Noise level**	Weight
	bar(e)	psig	l/s	m³/h	cfm	kW	hp	dB(A)	kg
<b>50/60 Hz version</b>									
GA7 VSD	4	58	7.3-20.4	26.3-73.4	15.5-43.2	7.5	10	67	175
	7	102	7.1-20.2	25.6-72.7	15.0-42.8	7.5	10	67	175
	10	146	7.0-17.1	25.2-61.6	14.8-36.2	7.5	10	67	175
	12.5	181	8.1-13.2	29.2-47.5	17.2-28.0	7.5	10	67	175
GA11 VSD	4	58	7.3-30.2	26.3-108.7	15.5-64.0	11	15	67	175
	7	102	7.1-30.0	25.6-180.0	15.0-63.6	11	15	67	175
	10	146	7.0-25.2	25.2-90.7	14.8-53.4	11	15	67	175
	12.5	181	8.1-21.9	29.2-78.8	17.2-46.4	11	15	67	175
GA15 VSD	4	58	7.3-37.5	26.3-135.0	15.5-79.4	15	20	67	175
	7	102	7.1-37.0	25.6-133.2	15.0-78.4	15	20	67	175
	10	146	7.0-30.3	25.2-109.1	14.8-64.2	15	20	67	175
	12.5	181	8.1-24.7	29.2-88.9	17.2-52.3	15	20	67	175
GA18 VSD	4	58	11.9-58.6	42.8-211.0	25.2-124.2	18.5	25	70	276
	7	102	11.8-58.3	42.5-209.9	25.0-123.5	18.5	25	70	276
	10	146	10.4-48.7	37.5-175.2	22.1-103.1	18.5	25	70	276
	12.5	181	12.4-42.6	44.6-153.4	26.3-90.3	18.5	25	70	276
GA 22 VSD	4	58	11.9-66.7	42.8-240.0	25.2-141.3	22	30	70	296
	7	102	11.8-66.5	42.5-239.4	25.0-140.9	22	30	70	296
	10	146	10.4-56.5	37.5-203.3	22.1-119.6	22	30	70	296
	12.5	181	12.4-50.0	44.6-180.1	26.3-106.0	22	30	70	296
GA30 VSD	4	58	15.5-94.1	55.8-338.8	32.8-199.3	30	40	69	522
	7	102	14.6-92.5	52.6-333.0	31.0-196.0	30	40	69	522
	10	146	13.7-82.2	49.3-295.9	29.0-174.0	30	40	69	522
	12.5	181	15.1-69.8	54.4-251.3	31.9-147.9	30	40	69	522
GA37 VSD	4	58	22.6-115.5	81.4-415.8	47.7-244.6	37	50	69	550
	7	102	22.1-114.5	79.6-412.2	46.8-242.5	37	50	69	550
	10	146	21.0-100.1	75.6-360.4	44.5-212.0	37	50	69	550
	12.5	181	23.2-84.0	83.5-302.4	49.1-177.9	37	50	69	550
GA 45 VSD	4	58	28.1-150	101.2-540	59.5-317.8	45	60	70	835
	7	102	27.8-146.4	100.1-527.0	58.9-310.2	45	60	70	835
	10	146	27.0-127.6	97.2-459.3	57.2-270.4	45	60	70	835
	12.5	181	40.1-110.1	144.4-396.4	85.0-233.3	45	60	70	835
GA 55 VSD	4	58	27.9-180.8	100.4-650.9	59.1-383.1	55	75	70	845
	7	102	27.6-180.0	99.4-648.0	58.5-381.4	55	75	70	845
	10	146	27.4-157.0	98.6-565.2	58.1-332.6	55	75	70	845
	12.5	181	40.2-135	144.7-486.0	85.2-286.0	55	75	70	845
GA 75 VSD	4	58	28.5-226.4	102.6-815.0	60.4-479.7	75	100	73	865
	7	102	28.4-224.7	102.2-808.9	60.2-476.1	75	100	73	865
	10	146	28.1-193.7	101.2-697.3	59.5-410.5	75	100	73	865
	12.5	181	41.8-166.7	150.5-600.1	88.6-353.2	75	100	73	865

\* 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)  
 - 10 bar(e)  
 - 12.5 bar(e)

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

## Options

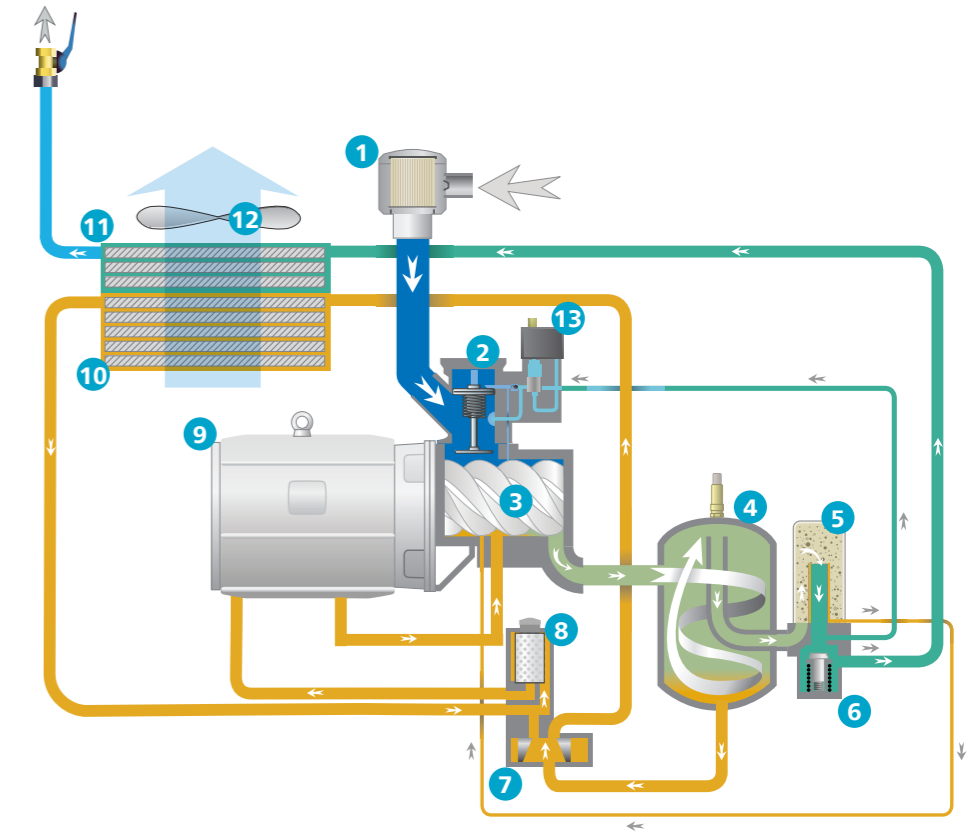
	GA 7-15 VSD	GA 18-22VSD	GA 30-37 VSD	GA 45-75VSD
Tropical thermostat	—	✓	✓	✓
Wooden package	✓	✓	✓	✓
RXD oil	✓	✓	✓	✓
Food Grade oil	✓	✓	✓	✓
Test report	✓	✓	✓	✓
Witness certificate	✓	✓	✓	✓
Water separator and drain	✓	✓	✓	✓
EMC filter (for China)	✓	—	✓	✓

Dimensions	Standard					
	L (mm)	W (mm)	H (mm)	L (in)	W (in)	H (in)
GA 7-15 VSD	767	623	972	30.20	24.53	38.27
GA 18-22 VSD	978	695	1473	38.5	27.35	58
GA 30-37 VSD	1150	820	1620	45.28	32.28	63.78
GA 45-75 VSD	1610	990	1870	63.39	38.98	73.62



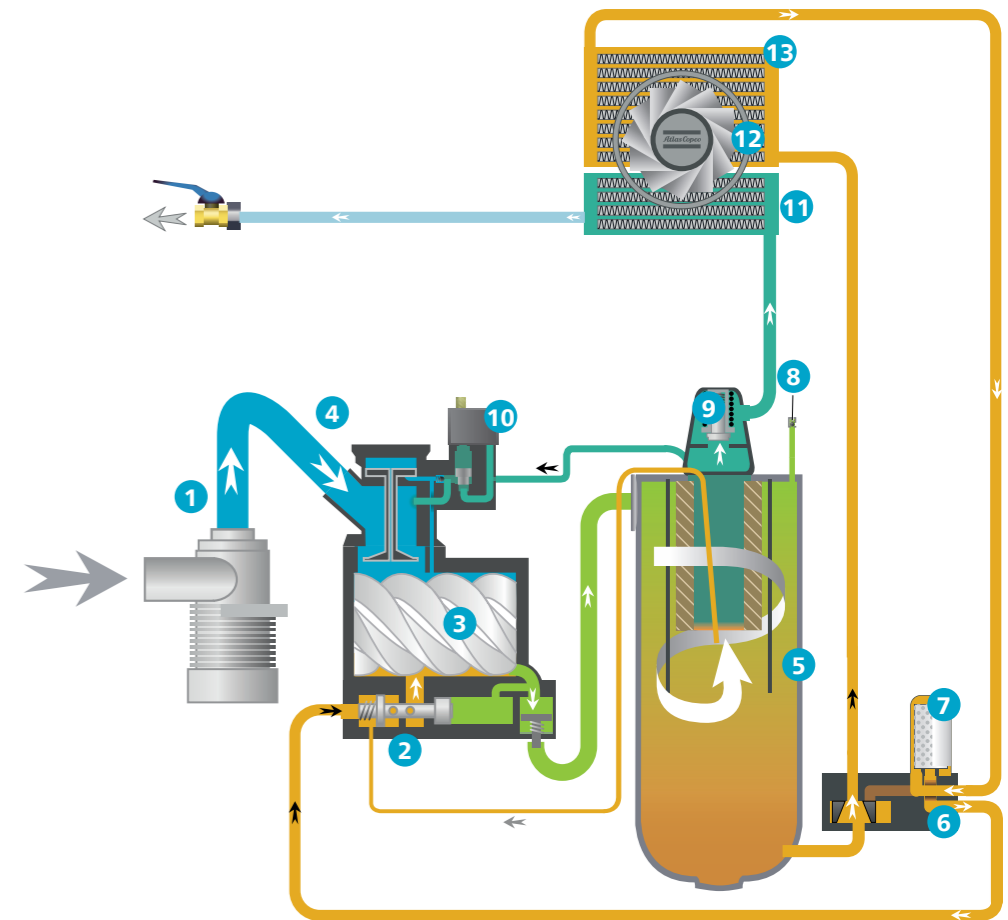
## Flow chart GA 7-22 VSD

- Wet compressed air
  - Dry compressed air
  - Intake air
  - Air/oil mixture
  - Oil
- 1 Inlet filter
  - 2 Spring inlet valve
  - 3 Screw element
  - 4 Air/oil vessel separator
  - 5 Oil separator
  - 6 Minimum pressure valve
  - 7 Thermostatic bypass valve
  - 8 Oil filter
  - 9 Motor
  - 10 Oil cooler
  - 11 After cooler
  - 12 Fan
  - 13 Solenoid valve



## Flow chart GA 30-75 VSD

- Wet compressed air
  - Dry compressed air
  - Intake air
  - Air/oil mixture
  - Oil
- 1 Inlet filter
  - 2 Oil stop valve
  - 3 Screw element
  - 4 Inlet valve
  - 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





ISO 9001 • ISO 14001  
OHSAS 18001

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