

## Water-injected screw compressors, 15-55 kW / 20-75 hp AQ 30-55 / 15-55 VSD

Atlas Copco's AQ water-injected screw compressors, available in water-cooled and air-cooled versions, meet your precise needs for pure, oil-free air while offering high-pressure capability and improved energy efficiency. Developed especially for applications demanding the highest levels of purity, such as pharmaceutical production, food processing and critical electronics, AQ compressors eliminate the risks of oil contamination as well as the resulting extra costs. They ensure consistent 100% oil-free air while you benefit from lower operating and maintenance costs with an ISO 8573-1 CLASS 0 (2010) certified compressor.

### CUSTOMER BENEFITS

- **High efficiency** – Thanks to the superior cooling capability of water which ensures that the heat is removed efficiently at the source, more air per kW of power is generated. Energy savings of 35% on average are possible with the Variable Speed Drive versions:

- Load/no load transition losses are eliminated.
- Precise pressure control allows a tighter pressure band and a lower average working pressure, resulting in reduced energy consumption.
- **Certified 100% oil-free air** – AQ compressors provide 100% pure, clean air, complying with ISO 8573-1 CLASS 0 (2010) certification. CLASS 0 means zero risk of contamination; zero risk of damaged or unsafe products; zero risk of losses from operational downtime; and zero risk of damaging your company's hard-won professional reputation. In 2006, Atlas Copco was the first manufacturer in the world to receive such certification for an oil-free compressor.
- **Quiet operation** – AQ compressors are supplied in a sound-insulated canopy, thus avoiding the need for a separate compressor room and allowing installation in most working environments.
- **Advanced control and monitoring** – To maximize efficiency and reliability, the Elektronikon® controls the main drive motor and regulates system pressure within a predefined and narrow pressure band. The Elektronikon® controller can be adapted to your specific needs with extra sensors, digital contacts, fieldbus, Internet and SMS communication functions. In combination with the ES multiple compressor controller, the operation of your complete compressor room is optimized.



AQ 55 VSD FF



At the heart of the AQ series is a unique screw element with water-injection for a highly efficient, almost isothermal compression.

The polymer ceramic rotors with an optimized rotor profile are guided by water-lubricated bearings; this ensures that the compressor element is not contaminated with oil, in order to produce oil-free air.

**Rotors**

A highly efficient compression process is achieved thanks to the polymer ceramic rotors with an optimized profile. The combination of corrosion-free, highly-efficient raw materials and the smooth water lubrication results in a much longer service life.

**Element housing**

The strength and long

service life are achieved by using an element casing made of aluminum bronze, which eliminates the risk of corrosion inside the housing.

**Element bearings**

Using hydrodynamic bearings ensures a long service life, because there are no friction points in the bearing; it just glides on a water film and does not need any oil or lubrication.

50 Hz versions

Type	Max. working pressure (bar(e)/psig)		Capacity FAD (*)			Installed motor power		Noise level(**)	Weight (kg/lbs)		
	Pack	Full feature	l/s	m <sup>3</sup> /min	cfm	kW	hp		Pack	Full feature	
<b>air-COOLED</b>											
AQ 30	7.5	7.5 / 109	7.25 / 105	84.9	5.1	180.1	30	40	68	1226 / 2703	1320 / 2910
	10	10 / 145	9.75 / 141	68.3	4.1	144.8	30	40	68	1226 / 2703	1320 / 2910
	13	13 / 189	12.75 / 185	53	3.2	113	30	40	68	1226 / 2703	1320 / 2910
AQ 37	7.5	7.5 / 109	7.25 / 105	102	6.1	215.4	37	50	69	1298 / 2862	1395 / 3075
	10	10 / 145	9.75 / 141	86.4	5.2	183.6	37	50	69	1298 / 2862	1395 / 3075
	13	13 / 189	12.75 / 185	69.2	4.2	148.3	37	50	69	1298 / 2862	1395 / 3075
AQ 45	7.5	7.5 / 109	7.25 / 105	121.4	7.3	257.8	45	60	71	1321 / 2912	1416 / 3122
	10	10 / 145	9.75 / 141	98.1	5.9	208.4	45	60	71	1321 / 2912	1416 / 3122
	13	13 / 189	12.75 / 185	82.2	4.9	173	45	60	71	1321 / 2912	1416 / 3122
AQ 55	7.5	7.5 / 109	7.25 / 105	139.1	8.4	296.6	55	75	72	1378 / 3038	1497 / 3300
	10	10 / 145	9.75 / 141	118.1	7.1	250.7	55	75	72	1378 / 3038	1497 / 3300
	13	13 / 189	12.75 / 185	98.4	5.9	208.4	55	75	72	1378 / 3038	1497 / 3300
<b>WATER-COOLED</b>											
AQ 30	7.5	7.5 / 109	7.25 / 105	88.5	5.3	187.5	30	40	65	1121 / 2471	1215 / 2679
	10	10 / 145	9.75 / 141	71.2	4.3	151.8	30	40	65	1121 / 2471	1215 / 2679
	13	13 / 189	12.75 / 185	55	3.3	116.5	30	40	65	1121 / 2471	1215 / 2679
AQ 37	7.5	7.5 / 109	7.25 / 105	107.1	6.4	226.9	37	50	66	1193 / 2630	1290 / 2844
	10	10 / 145	9.75 / 141	91.2	5.5	194.2	37	50	66	1193 / 2630	1290 / 2844
	13	13 / 189	12.75 / 185	72.9	4.4	155.4	37	50	66	1193 / 2630	1290 / 2844
AQ 45	7.5	7.5 / 109	7.25 / 105	128.5	7.7	272.3	45	60	67	1216 / 2681	1313 / 2895
	10	10 / 145	9.75 / 141	108	6.5	230	45	60	67	1216 / 2681	1313 / 2895
	13	13 / 189	12.75 / 185	89.9	5.4	190.7	45	60	67	1216 / 2681	1313 / 2895
AQ 55	7.5	7.5 / 109	7.25 / 105	152.7	9.2	323.6	55	75	68	1273 / 2806	1392 / 3069
	10	10 / 145	9.75 / 141	131.2	7.9	279	55	75	68	1273 / 2806	1392 / 3069
	13	13 / 189	12.75 / 185	109	6.5	230	55	75	68	1273 / 2806	1392 / 3069

(\*)Unit performance measured according to ISO 1217, Ed. 4, 2009, Annex C.

Reference conditions:

- Absolute Inlet pressure, specify bar(a), ( e ) 1 bar (14.5 psi)
- Intake air temperature 20°C (68°F)

(\*\*)Noise level\* measured at a distance of 1m according to Pneuop/Cagi PN8NTC2 test code: 3dB()

FAD is measured at the following working pressure:

- 7 bar versions at 7.5 bar(e)

**AQ 37-55 VSD**

H: 1840 mm, 72"  
W: 965 mm, 40"  
L: 2435 mm, 96"



60 Hz versions

Type	Max. working pressure (bar(e)/psig)			Capacity FAD <sup>(1)</sup>			Installed motor power		Noise level*	Weight (kg/lbs)	
	-	Full feature		l/s	m <sup>3</sup> /min	cfm	kW	hp		Pack	Full feature
<b>AIR-COOLED</b>											
AQ 30	7.4	7.4 / 107	7.15 / 104	87.8	5.3	187.2	30	40	68	1226 / 2703	1320 / 2910
	9.1	9.1 / 132	8.85 / 128	78.7	4.7	166.1	30	40	68	1226 / 2703	1320 / 2910
	10.8	10.8 / 157	10.55 / 153	67.5	4.1	144.8	30	40	68	1226 / 2703	1320 / 2910
	12.5	12.5 / 181	12.25 / 178	59.2	3.6	127.1	30	40	68	1226 / 2703	1320 / 2910
AQ 37	7.4	7.4 / 107	7.15 / 104	105.5	6.3	222.5	37	50	69	1298 / 2862	1395 / 3075
	9.1	9.1 / 132	8.85 / 128	87.7	5.3	187.2	37	50	69	1298 / 2862	1395 / 3075
	10.8	10.8 / 157	10.55 / 153	83	5	176.6	37	50	69	1298 / 2862	1395 / 3075
	12.5	12.5 / 181	12.25 / 178	76.1	4.6	162.4	37	50	69	1298 / 2862	1395 / 3075
AQ 45	7.4	7.4 / 107	7.15 / 104	122.4	7.3	257.8	45	60	71	1321 / 2912	1416 / 3122
	9.1	9.1 / 132	8.85 / 128	103	6.2	219.1	45	60	71	1321 / 2912	1416 / 3122
	10.8	10.8 / 157	10.55 / 153	96	5.8	204.8	45	60	71	1321 / 2912	1416 / 3122
	12.5	12.5 / 181	12.25 / 178	88.7	5.3	187.2	45	60	71	1321 / 2912	1416 / 3122
AQ 55	7.4	7.4 / 107	7.15 / 104	146.8	8.8	310.8	55	75	72	1378 / 3038	1497 / 3300
	9.1	9.1 / 132	8.85 / 128	118.2	7.1	250.7	55	75	72	1378 / 3038	1497 / 3300
	10.8	10.8 / 157	10.55 / 153	119.6	7.2	254.3	55	75	72	1378 / 3038	1497 / 3300
	12.5	12.5	12.25	106	6.4	226	55	75	72	1378 / 3038	1497 / 3300
<b>WATER-COOLED</b>											
AQ 30	7.4	7.4 / 107	7.15 / 104	91.8	5.5	194.2	30	40	65	1121 / 2471	1215 / 2679
	9.1	9.1 / 132	8.85 / 128	82.7	5	176.6	30	40	65	1121 / 2471	1215 / 2679
	10.8	10.8 / 157	10.55 / 153	70.4	4.2	148.3	30	40	65	1121 / 2471	1215 / 2679
	12.5	12.5 / 181	12.25 / 178	61.7	3.7	130.7	30	40	65	1121 / 2471	1215 / 2679
AQ 37	7.4	7.4 / 107	7.15 / 104	111.3	6.7	236.6	37	50	66	1193 / 2630	1290 / 2844
	9.1	9.1 / 132	8.85 / 128	93	5.6	197.8	37	50	66	1193 / 2630	1290 / 2844
	10.8	10.8 / 157	10.55 / 153	87.5	5.3	187.2	37	50	66	1193 / 2630	1290 / 2844
	12.5	12.5 / 181	12.25 / 178	80.7	4.8	169.5	37	50	66	1193 / 2630	1290 / 2844
AQ 45	7.4	7.4 / 107	7.15 / 104	134	8	282.5	45	60	67	1216 / 2681	1313 / 2895
	9.1	9.1 / 132	8.85 / 128	115.2	6.9	243.7	45	60	67	1216 / 2681	1313 / 2895
	10.8	10.8 / 157	10.55 / 153	104.2	6.3	222.5	45	60	67	1216 / 2681	1313 / 2895
	12.5	12.5 / 181	12.25 / 178	97.8	5.9	208.4	45	60	67	1216 / 2681	1313 / 2895
AQ 55	7.4	7.4 / 107	7.15 / 104	161.7	9.7	342.6	55	75	68	1273 / 2806	1392 / 3069
	9.1	9.1 / 132	8.85 / 128	132.7	8	282.5	55	75	68	1273 / 2806	1392 / 3069
	10.8	10.8 / 157	10.55 / 153	131.5	7.9	279.1	55	75	68	1273 / 2806	1392 / 3069
	12.5	12.5	12.25	118.7	7.1	250.7	55	75	68	1273 / 2806	1392 / 3069

AQ 37-55 VSD

Type	Max. working pressure <sup>(1)</sup>		Capacity FAD <sup>(2)</sup>			Installed motor power		Noise level <sup>(3)</sup>	Weight (kg/lbs)	
	bar(e)	psig	l/s	m <sup>3</sup> /min	cfm	kW	hp		Pack	Full Feature
<b>AIR-COOLED</b>										
AQ 37 VSD 13 <sup>(1)</sup>	13	175	42.0 – 104.0	2.5 – 6.2	89.0 – 220.4	37	50	69	1195 / 2635	1306 / 2879
AQ 55 VSD 13 <sup>(1)</sup>	13	175	42.3 – 154.9	2.5 – 9.3	89.6 – 328.2	55	75	72	1195 / 2635	1314 / 2897
<b>WATER-COOLED</b>										
AQ 37 VSD 13 <sup>(1)</sup>	13	175	42.0 – 108.0	2.5 – 6.2	89.0 – 228.8	37	50	66	1090 / 2403	1201 / 2648
AQ 55 VSD 13 <sup>(1)</sup>	13	175	41.9 – 160.9	2.5 – 9.3	88.8 – 340.9	55	75	69	1090 / 2403	1209 / 2665

<sup>(1)</sup> Full-Feature units max. working pressure 12.5 bar(e)/181 psig.

<sup>(2)</sup> Stated performance according ISO 1217, Ed. 4, 2009, Annex E.

<sup>(3)</sup> Mean sound level according to ISO2151, tolerance 3 dB(A).