

G 90-355 (VSD): Reliability, efficiency and simplicity



Smaller footprints

- Smaller footprint than all competitors.
- Save more installation space, increase capacity in limited installation space.



State-of-the-art screw element

- Atlas Copco designed and patented asymmetric element profile with high quality bearings offering low wear and increased reliability.
- The unique profile design provides industry leading energy efficiency to lower your operating cost.



High-efficiency cooler

- Element outlet temperature is optimized, avoid machine shut down due to element high temperature, increase reliability.
- Stainless cooler bundle avoid corrosion for water cooled machine.
- Optimized design reduces maintenance cost and increases reliability.
- Ensure max ambient temperature is up to 46°C.



Easy to install, use and service

- No foundations needed: easy installation.
- Completely integrated, silenced package.
- Easy to transport and simple maintenance.



Superior air-oil separation

- Reduction of pressure drops and energy costs.
- Low oil consumption ensures minimal maintenance costs and long compressor lifetime.
- Optimized design of vessel to reduce the oil carry over, increase reliability.



High-efficiency motor

- High-efficiency (IE3) IP55 motor (Class F insulation) adapted to harshest conditions.
- Long-term stable operation even in harsh environments.



Optimal control with the Elektronikon® MK5 Touch & SmartLink

- Clear icons and intuitive navigation provide you with fast access to all of the important settings and data.
- Monitoring of the equipment running conditions and maintenance status
- SmartLink provides remote monitoring of compressor running status.

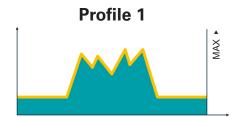


VSD: Driving down your energy costs

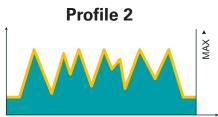
Over 70% of a compressor's life cycle cost is taken up by the energy it consumes. Moreover, the generation of compressed air can account for more than 40% of a plant's total electricity bill. Atlas Copco was the first compressor manufacturer to introduce compressors with integrated Variable Speed Drive (VSD). With over 20 years of design and manufacturing experience our VSD technology has reached new heights of energy savings and reliability. VSD technology reduces energy consumption in systems that have varying air demand patterns. This reduction in energy consumption not only reduces your energy consumption but also your carbon footprint to help protect the environment for generations to come.

Why VSD technology?

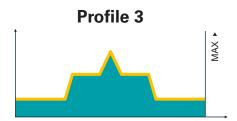
In almost every production environment, air demand fluctuates depending on different factors (time of the day, week or even month). Extensive measurements and studies of compressed air demand profiles show that many compressors have substantial variations in air demand. Only 8% of all installations have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



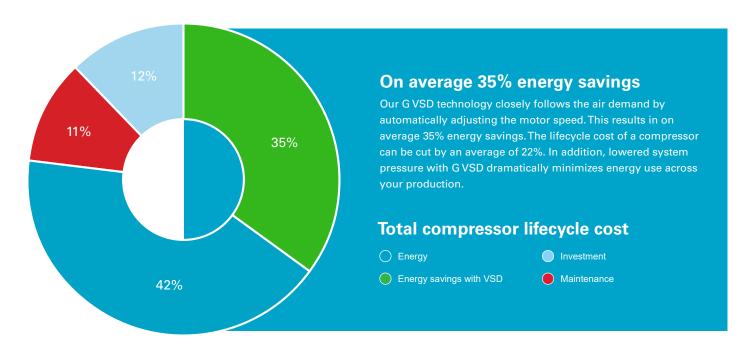
- 64% of all installations.
- Factory working 24 hrs/day: low demand at night & high demand during the day.



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



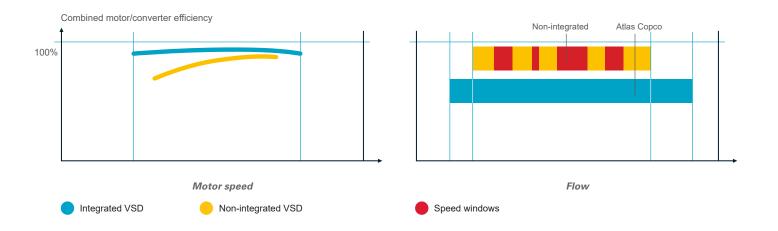
- 8% of all installations.
- Factory working 2 shifts/day, no weekend work: typical 'fixed' speed application.



Find out how much you can save

We can help you map the air demand profile of your current compressor installation and indicate potential energy savings with VSD compressors. For more information, please contact your local Atlas Copco representative.

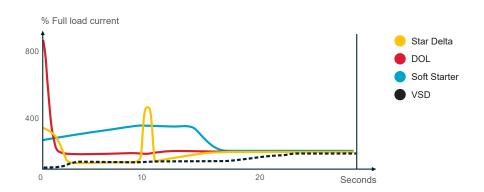
What is unique about the integrated Atlas Copco G VSD?



- 1 The Elektronikon® controls both the compressor and the integrated converter, ensuring maximum machine safety within parameters.
- 2 Flexible pressure selection from 4 to 10 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.

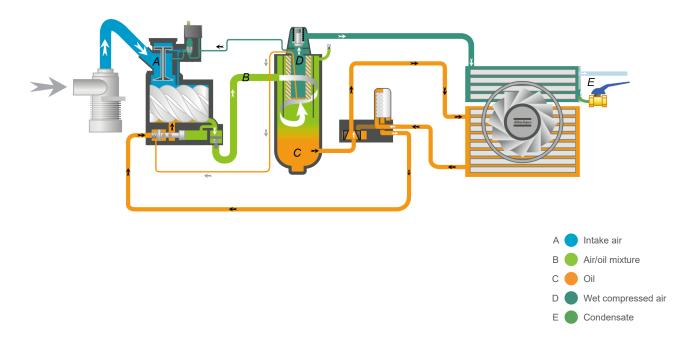
- 5 All Atlas Copco G VSD compressors are EMC tested and certified. Compressor operation does not influence external sources and vice versa.
- **6** Mechanical enhancements ensure that all components operate below critical vibration levels throughout the entire compressor speed range.
- 7 No 'speed windows' that can jeopardize energy savings or the stability of the net pressure. FAD range: 30-100%.
- 8 Net pressure band is maintained within 0.10 bar, 1.5 psi.

No current peaks

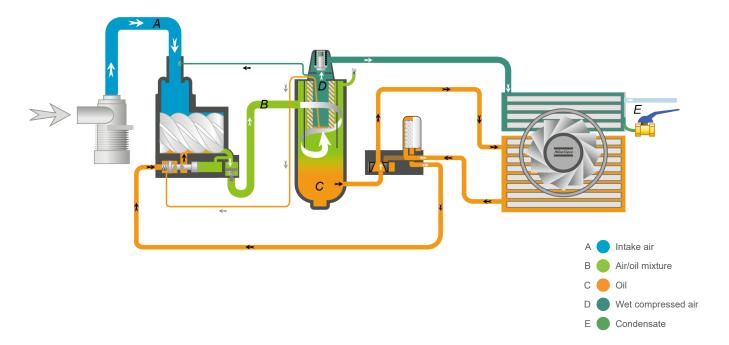


Flow chart

Fixed speed



Variable Speed Drive



Optimize your system

Scope of supply

- · Air inlet filter and flexibles
- Air intake valve
- Full load/no load regulator
- Long lifetime filtration and separation elements
- G/DIN connection for 50Hz unit, NPT/ANSI for 60Hz unit
- Heavy-duty oil filters
- Air-oil separator
- Compressed air aftercooler and oil cooler
- ASME/ML/AS1210/MOM approvals
- SmartLink

- Low noise cooling fan for air-cooled units
- · Corrosion resistant coolers for water-cooled units
- IE3/GB18613-2012 Level 2 Class F electric motor
- Starters (Star-Delta)
- Pre-mounted electrical cubicles
- Elektronikon® unit controller
- · Phase sequency relay
- Separate start and stop signal for MV voltage
- · Structural skid with no need for foundations
- Silenced canopy
- Flexible vibration dampers
- IE4 motor is standard for fixed speed CE models (≤200 kW)

Options

- Performance test certificate
- Witness performance test
- Seaworthy packing
- Energy recovery (G160-250)
- G 250L-355 energy recovery is available for CE & UL models

Dimensions



	Dimensions (Air-cooled)									
TYPE		L	١	N	Н					
	mm	inch	mm	inch	mm	inch				
G 90-132 (VSD)	1900	75	1200	47	2000	79				
G 160 (VSD)	2800	110	1600	63	2000	79				
G 200-250 (VSD)	2800	110	1600	63	2300	91				
G 250L-355 (VSD)	3400	134	1750	69	2400	94				
* G 250L-355 (VSD) CE	4000	157	1750	69	2400	94				

	Dimensions (Water-cooled)								
TYPE		L	١	N	н				
	mm	inch	mm	inch	mm	inch			
G 90-132 (VSD)	1900	75	1200	47	2000	79			
G 160 - 250 (VSD)	2800	110	1600	63	2000	79			
G 250L-355 (VSD)	3400	134	1750	69	2000	79			

Technical data 50 Hz

	Maximum wo	orking pressure		Capacity FAD (1)		Installed	notor power	Air Outlet Size	* Weight (sh	ipping mass)
TYPE	Star	ndard		Pack		mstanca	notor power	All Gutlet Gize	Staı	ndard
	bar(e)	psig	l/s	m³/min	cfm	kW	НР		kg	lbs
50 Hz										
G 90-7.5	7.5	109	294	17.6	623	90	125	G2-1/2''	1900	4189
G 90-8.5	8.5	123	270	16.2	571	90	125	G2-1/2''	1900	4189
G 90-10	10	145	254	15.3	539	90	125	G2-1/2''	1900	4189
G 90-14	14	203	217	13.0	460	90	125	G2-1/2''	1900	4189
G 110-7.5	7.5	109	335	20.1	710	110	150	G2-1/2''	2000	4409
G 110-8.5	8.5	123	314	18.8	664	110	150	G2-1/2''	2000	4409
G 110-10	10	145	290	17.4	614	110	150	G2-1/2''	2000	4409
G 110-14	14	203	247	14.8	523	110	150	G2-1/2''	2000	4409
G 132-7.5	7.5	109	404	24.2	855	132	175	G2-1/2''	2100	4630
G 132-8.5	8.5	123	383	23.0	811	132	175	G2-1/2''	2100	4630
G 132-10	10	145	344	20.7	729	132	175	G2-1/2''	2100	4630
G 132-14	14	203	302	18.1	640	132	175	G2-1/2''	2100	4630
G 160-7.5	7.5	109	516.7	31.0	1095	160	215	DN100	3973	8759
G 160-8.5	8.5	123	500	30.0	1059	160	215	DN100	3973	8759
G 160-10	10	145	450	27.0	953	160	215	DN100	3973	8759
G 160-14	14	203	380	22.8	805	160	215	DN100	3973	8759
G 180-7.5	7.5	109	603.4	36.2	1279	180	241	DN100	4213	9288
G 180-8.5	8.5	123	583.3	35.0	1236	180	241	DN100	4213	9288
G 180-10	10	145	511.7	30.7	1084	180	241	DN100	4213	9288
G 180-14	14	203	411.7	24.7	872	180	241	DN100	4213	9288
G 200-7.5	7.5	109	693.4	41.6	1469	200	268	DN100	4298	9475
G 200-8.5	8.5	123	670	40.2	1420	200	268	DN100	4298	9475
G 200-10	10	145	591.6	35.5	1254	200	268	DN100	4298	9475
G 200-14	14	203	495	29.7	1049	200	268	DN100	4298	9475
G 250-7.5	7.5	109	750	45.0	1589	250	335	DN100	4513	9949
G 250-8.5	8.5	123	750	45.0	1589	250	335	DN100	4513	9949
G 250-10	10	145	673.4	40.4	1427	250	335	DN100	4513	9949
G 250-14	14	203	568.3	34.1	1204	250	335	DN100	4513	9949
G 250L-7.5	7.5	109	890	53.4	1886	250	335	DN125	6760	14903
G 250L-8.5	8.5	123	844	50.6	1788	250	335	DN125	6760	14903
G 250L-10	10	145	785	47.1	1662	250	335	DN125	6760	14903
G 250L-14	14	203	650	39.0	1378	250	335	DN125	6760	14903
G 315-7.5	7.5	109	1049	62.9	2222	315	422	DN125	6790	14969
G 315-8.5	8.5	123	1002	60.1	2123	315	422	DN125	6790	14969
G 315-10	10	145	916	55.0	1941	315	422	DN125	6790	14969
G 315-14	14	203	750	45.0	1589	315	422	DN125	6790	14969
*G 355-7.5	7.5	109	1093	65.6	2316	355	476	DN125	7130	15719
G 355-8.5	8.5	123	1093	65.6	2316	355	476	DN125	7130	15719
G 355-10	10	145	1000	60.0	2120	355	476	DN125	7130	15719
G 355-14	14	203	834	50.0	1766	355	476	DN125	7130	15719

 $^{^{\}star}\,\text{CE}$ air cooled machines are 255kg heavier than the standard version.

(1) Unit performance : Measured according to ISO1217 Reference conditions:

- Absolute inlet pressure 1 bar (14,5psi)

- Intake air temperature 20°C (68°F)

- Cooling medium temperature 20°C (68°F)

FAD is measured at the following working pressures:

• 7.5 bar variants at 7 bar

8.5 bar variants at 8 bar10 bar variants at 10 bar14 bar variants at 12.5 bar

^{*} G 355-7.5 FAD is 1140 l/s for water cooled version

Technical data 50 Hz VSD

		Maximum wo	rking pressure		Capacity FAD (1)		Installed m	otor power	Air Outlet Size		eight pping
TYPE		Star	ndard		Pack			.о.о. ролго.	7.111 0 41.101 0.120		ass)
		bar(e)	psig	I/s	m³/min	cfm	kW	НР		kg	lbs
50 Hz									·		
G 110 VSD-10	Minimum	4	58	77-335	4.6-20.1	163-710	110	150	G2-1/2''	2100	4630
G 110 VSD-10		7	102	77-334	4.6-20.1	163-708	110	150	G2-1/2''	2100	4630
G 110 VSD-10		8	116	76-317	4.6-19	161-672	110	150	G2-1/2''	2100	4630
G 110 VSD-10	Maximum	10	138	76-287	4.5-17.2	160-607	110	150	G2-1/2''	2100	4630
G 110 VSD-14	Maximum	14	203	83-244	5-14.6	176-516	110	150	G2-1/2''	2100	4630
G 132 VSD-10	Minimum	4	58	110-398	6.6-23.9	233-843	132	175	G2-1/2''	2200	4850
G 132 VSD-10		7	102	109-397	6.6-23.8	231-842	132	175	G2-1/2''	2200	4850
G 132 VSD-10		8	116	108-378	6.5-22.7	230-800	132	175	G2-1/2''	2200	4850
G 132 VSD-10	Maximum	10	138	108-342	6.5-20.5	229-724	132	175	G2-1/2''	2200	4850
G 132 VSD-14	Maximum	14	203	112-288	6.7-17.3	238-611	132	175	G2-1/2''	2200	4850
G 160VSD-10		10	145	201.9-543.3	12.1-32.6	428-1151	160	215	DN100	3570	7871
G 160VSD-14		14	203	202.3-461.6	12.1-27.7	429-978	160	215	DN100	3570	7871
G 180VSD-10		10	145	198.3-613.4	11.9-36.8	420-1300	180	241	DN100	3607	7952
G 180VSD-14		14	203	199.6-516.6	12.0-31.0	423-1095	180	241	DN100	3607	7952
G 200VSD-10		10	145	198.4-706.7	11.9-42.4	420-1497	200	268	DN100	3617	7974
G 200VSD-14		14	203	254.1-600	15.2-36.0	538-1271	200	268	DN100	3617	7974
G 250VSD-10		10	145	198.5-750	11.9-45.0	421-1589	250	335	DN100	3792	8360
G 250VSD-14		14	203	200.4-651.7	12.0-39.1	425-1381	250	335	DN100	3792	8360
G 250LVSD-10		10	145	277-883	16.6-53.0	587-1872	250	335	DN125	6495	14319
G 250LVSD-14		14	203	267-750	16.0-45.0	566-1589	250	335	DN125	6495	14319
G 315VSD-10		10	145	352-1050	21.1-63.0	746-2225	315	422	DN125	6740	14859
G 315VSD-14		14	203	345-939	20.7-56.3	731-1989	315	422	DN125	6740	14859
*G 355VSD-10		10	145	351-1090	21.1-65.4	744-2310	355	476	DN125	6750	14881
G 355VSD-14		14	203	345-1020	20.7-61.2	731-2162	355	476	DN125	6750	14881

^{*} CE air cooled machines are 235kg heavier than the standard version.

(1) Unit performance : Measured according to ISO1217

Reference conditions:
- Absolute inlet pressure 1 bar (14,5psi)

- Intake air temperature 20°C (68°F)
- Cooling medium temperature 20°C (68°F)

FAD is measured at the following working pressures:
• 10 bar variants between 7 to 10 bar
• 14 bar variants between 10 to 14 bar

 $^{^{\}star}$ G 355VSD-10 max FAD is up to 1140 l/s for water cooled version

Technical data 60 Hz

	Maximum working pressure			Capacity FAD (1)		la stelled as	Installed motor power		Weight (shi	pping mas
TYPE	Stan	idard		Pack		Installed m	lotor power	Air Outlet Size	Standard	
	bar(e)	psig	I/s	m³/min	cfm	kW	НР		kg	lbs
Hz										
G 90-7.5	7.5	109	298	17.9	632	90	125	NPT 2-1/2''	1900	4189
G 90-8.5	8.5	123	269	16.1	569	90	125	NPT 2-1/2''	1900	4189
G 90-10	10	145	254	15.2	537	90	125	NPT 2-1/2''	1900	4189
G 90-14	14	203	223	13.4	472	90	125	NPT 2-1/2''	1900	4189
G 110-7.5	7.5	109	332	19.9	704	110	150	NPT 2-1/2''	2000	440
G 110-8.5	8.5	123	313	18.8	664	110	150	NPT 2-1/2''	2000	440
G 110-10	10	145	288	17.3	610	110	150	NPT 2-1/2''	2000	440
G 110-14	14	203	248	14.9	525	110	150	NPT 2-1/2''	2000	440
G 132-7.5	7.5	109	403	24.2	853	132	175	NPT 2-1/2''	2100	463
G 132-8.5	8.5	123	383	23.0	811	132	175	NPT 2-1/2''	2100	463
G 132-10	10	145	346	20.8	733	132	175	NPT 2-1/2"	2100	463
G 132-14	14	203	313	18.8	663	132	175	NPT 2-1/2''	2100	463
G 160-7.5	7.5	109	521.6	31.3	1105	160	215	ANSI 4"	3973	875
G 160-8.5	8.5	123	503.3	30.2	1066	160	215	ANSI 4"	3973	875
G 160-3.5	10	145	460	27.6	975	160	215	ANSI 4"	3973	875
G 160-10	14	203	376.7	22.6	798	160	215	ANSI 4"	3973	875
G 180-14	7.5	109	595	35.7	1261	180	241	ANSI 4"	4213	928
G 180-8.5	8.5	123	583.3	35.0	1236	180	241	ANSI 4"	4213	928
G 180-10	10	145	516.6	31.0	1095	180	241	ANSI 4"	4213	928
G 180-14	14	203	416.7	25.0	883	180	241	ANSI 4"	4213	928
G 200-7.5	7.5	109	680.1	40.8	1441	200	268	ANSI 4"	4298	947
G 200-8.5	8.5	123	668.3	40.1	1416	200	268	ANSI 4"	4298	947
G 200-10	10	145	596.7	35.8	1264	200	268	ANSI 4"	4298	947
G 200-14	14	203	495.1	29.7	1049	200	268	ANSI 4"	4298	947
G 250-7.5	7.5	109	741.7	44.5	1572	250	335	ANSI 4"	4513	994
G 250-8.5	8.5	123	741.6	44.5	1571	250	335	ANSI 4"	4513	994
G 250-10 G 250-14	10 14	145 203	683.3 570	41.0 34.2	1448 1208	250 250	335 335	ANSI 4"	4513 4513	994 994
		109	890	53.4		250	335	ANSI 5"		1490
G 250L-7.5 G 250L-8.5	7.5 8.5	109	890	53.4	1886 1785	250 250	335	ANSI 5"	6760 6760	1490
G 250L-8.5 G 250L-10	10	145	780	46.8	1652	250	335	ANSI 5"	6760	1490
G 250L-10 G 250L-14	10	203	780 705	46.8	1652 1494	250 250	335	ANSI 5"	6760	1490
G 250L-14 G 315-7.5	7.5	109	1046	42.3 62.8	2217	315	422	ANSI 5"	6790	1490
G 315-8.5	8.5	123	1006	60.4	2131	315	422	ANSI 5"	6790	1496
G 315-10	10	145	910	54.6	1928	315	422	ANSI 5"	6790	1496
G 315-14	14	203	777	46.6	1646	315	422	ANSI 5"	6790	1496
*G 355-7.5	7.5	109	1093	65.6	2316	355	476	ANSI 5"	7130	1571
G 355-8.5	8.5	123	1084	65.1	2297	355	476	ANSI 5"	7130	1571
G 355-10	10	145	1004	60.3	2128	355	476	ANSI 5"	7130	1571
G 355-14	14	203	854	51.2	1809	355	476	ANSI 5"	7130	1571

^{*} G 355-7.5 FAD is 1140 l/s for water cooled version

(1) Unit performance : Measured according to ISO1217 Reference conditions:

- Absolute inlet pressure 1 bar (14,5psi)

- Intake air temperature 20°C (68°F)

- Cooling medium temperature 20°C (68°F)

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 10 bar
• 14 bar variants at 12.5 bar

Technical data 60 Hz VSD

		Maximum wo	rking pressure		Capacity FAD (1)		Installed m	otor nower	Air Outlet Size		ight oping
TYPE		Star	ndard		Pack		mstaneu m	lotor power	All Outlet Size		iss)
		bar(e)	psig	I/s	m³/min	cfm	kW	НР		kg	lbs
60 Hz											
G 110 VSD - 10	Minimum	4	58	81-335	4.9-20.1	172-710	110	150	NPT 2-1/2''	2100	4630
G 110 VSD - 10		7	102	77-335	4.6-20.1	163-710	110	150	NPT 2-1/2"	2100	4630
G 110 VSD - 10		8	116	76-313	4.6-18.8	161-664	110	150	NPT 2-1/2''	2100	4630
G 110 VSD - 10	Maximum	10	138	76-290	4.5-17.4	160-614	110	150	NPT 2-1/2"	2100	4630
G 110 VSD - 14	Maximum	14	203	83-244	5-14.6	176-518	110	150	NPT 2-1/2''	2100	4630
G 132 VSD - 10	Minimum	4	58	114-399	6.8-23.9	241-845	132	175	NPT 2-1/2"	2200	4850
G 132 VSD - 10		7	102	109-399	6.6-23.9	231-844	132	175	NPT 2-1/2''	2200	4850
G 132 VSD - 10		8	116	108-383	6.5-23	230-811	132	175	NPT 2-1/2"	2200	4850
G 132 VSD - 10	Maximum	10	138	108-347	6.5-20.8	229-736	132	175	NPT 2-1/2''	2200	4850
G 132 VSD - 14	Maximum	14	203	112-288	8.7-17.3	238-611	132	175	NPT 2-1/2"	2200	4850
G 160VSD-10		10	145	201.9-543.3	12.1-32.6	428-1151	160	215	ANSI 4"	3570	7871
G 160VSD-14		14	203	202.3-461.6	12.1-27.7	429-978	160	215	ANSI 4"	3570	7871
G 180VSD-10		10	145	198.3-613.4	11.9-36.8	420-1300	180	241	ANSI 4"	3607	7952
G 180VSD-14		14	203	199.6-516.6	12.0-31.0	423-1095	180	241	ANSI 4"	3607	7952
G 200VSD-10		10	145	198.4-706.7	11.9-42.4	420-1497	200	268	ANSI 4"	3617	7974
G 200VSD-14		14	203	254.1-600	15.2-36.0	538-1271	200	268	ANSI 4"	3617	7974
G 250VSD-10		10	145	198.5-750	11.9-45.0	421-1589	250	335	ANSI 4"	3792	8360
G 250VSD-14		14	203	200.4-651.7	12.0-39.1	425-1381	250	335	ANSI 4"	3792	8360
G 250LVSD-10		10	145	277-883	16.6-53.0	587-1872	250	335	ANSI 5"	6495	14319
G 250LVSD-14		14	203	267-750	16.0-45.0	566-1589	250	335	ANSI 5"	6495	14319
G 315VSD-10		10	145	352-1050	21.1-63.0	746-2225	315	422	ANSI 5"	6740	14859
G 315VSD-14		14	203	345-939	20.7-56.3	731-1989	315	422	ANSI 5"	6740	14859
*G 355VSD-10		10	145	351-1090	21.1-65.4	744-2310	355	476	ANSI 5"	6750	14881
G 355VSD-14		14	203	345-1020	20.7-61.2	731-2162	355	476	ANSI 5"	6750	14881

^{*} G 355VSD-10 max FAD is up to 1140 l/s for water cooled version

(1) Unit performance: Measured according to ISO1217

Reference conditions:
- Absolute inlet pressure 1 bar (14,5psi)
- Intake air temperature 20°C (68°F)
- Cooling medium temperature 20°C (68°F)

FAD is measured at the following working pressures:
• 10 bar variants between 7 to 10 bar
• 14 bar variants between 10 to 14 bar

G 110-132 VSD+ (only 380V/50Hz available)



Proven in-house & high efficiency drivetrain

- Gear drive for ease service
- Angular contact bearing:
- High precision oil lubricate bearing
- Long lifetime
- Low noise
- Endurance tested
- Proven stable performance

- New generation of C142 element
- Oil cooling integrated Permanent

Magnetic motor

- IE5 super premium efficiency motor
- IP66, class H insulation



Innovative Neos Inverter

- Atlas Copco's in-house designed inverter, now also controls iPM motors
- IP5x protection (Power-electronics)
- Robust aluminum enclosure for trouble-free operation in the harshest conditions
- Fewer components: compact, simple and user-friendly

Technical data 50 Hz

	Maximum wo	rking pressure		Capacity FAD (1)		Installed motor power		Air Outlet Size	Weight (shipping mass)	
TYPE	Star	ndard		Pack				7 5 41.51 5.25	Standard	
	bar(e)	psig	I/s	m³/min	cfm				kg	lbs
50 Hz										
G 110VSD+-10	10	145	76-350	4.5-21	160-741	110	150	G2-1/2"	2130	4696
G 110VSD+-14	14	203	77-300	4.6-18	163-635	110	150	G2-1/2"	2130	4696
G 132VSD+-10	10	145	112-416	6.7-25	236-882	132	175	G2-1/2"	2230	4916

(1) Unit performance: Measured according to ISO1217

- Reference conditions:
 Absolute inlet pressure 1 bar (14,5psi)
- Intake air temperature 20°C (68°F)
 Cooling medium temperature 20°C (68°F)

FAD is measured at the following working pressures: • 10 bar variants between 7 to 10 bar

- 14 bar variants between 10 to 14 bar

Dimensions



	Dimensions (Air/Water-cooled)							
TYPE	ı		٧	v	н			
	mm	inch	mm	inch	mm	inch		
G 110-132 VSD+	1900	75	1200	47	2000	79		

