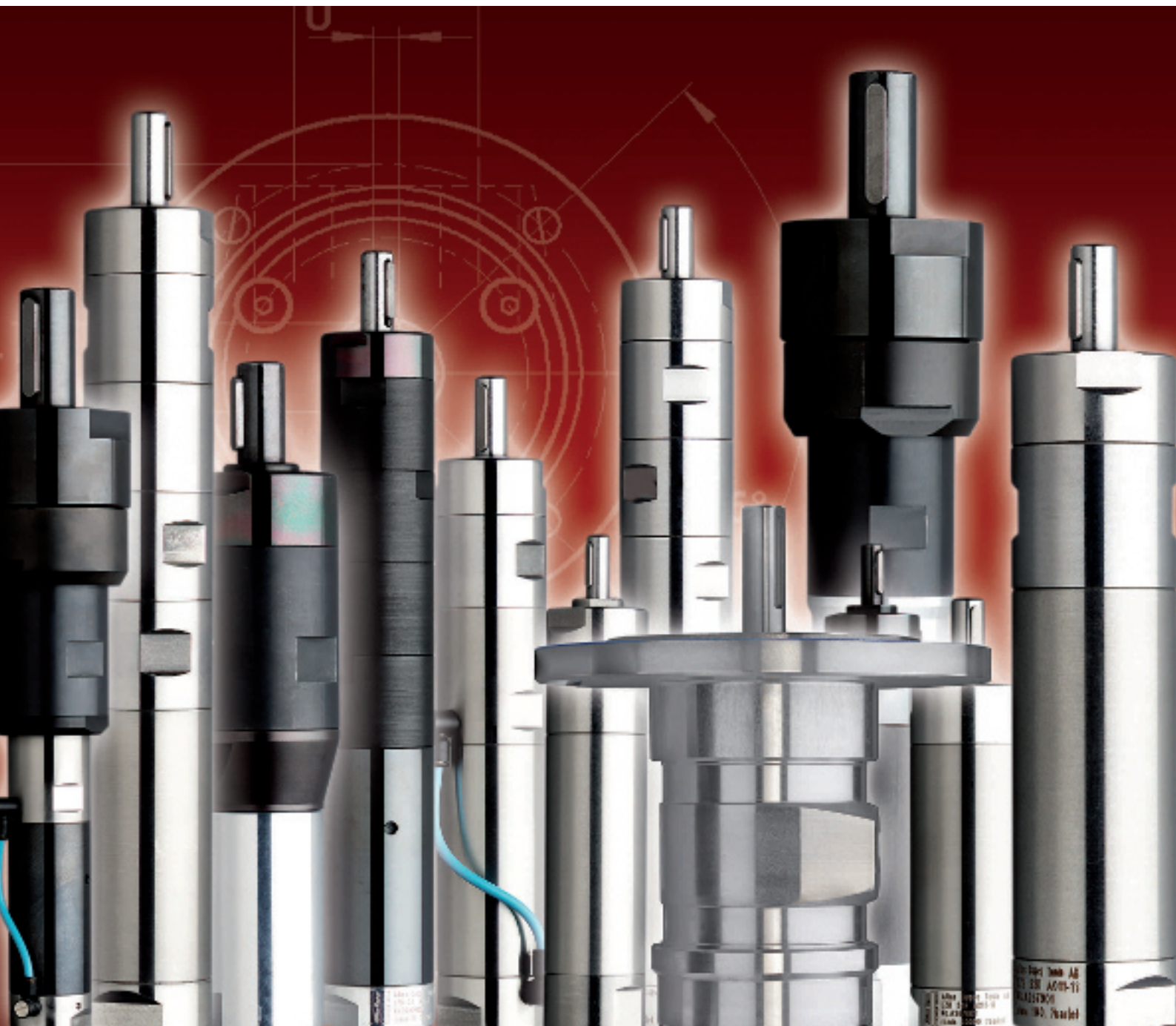


Atlas Copco Air Motors



Atlas Copco

Introduction – Vane Air Motors

Air motors from Atlas Copco – the reliable, cost-effective solution when applying power to rotating machines. Consider the air motor features and characteristics giving large benefits to the designer.

- Power-to-weight performance that is superior to most other motors, in fact, 75% lighter and 85% smaller than an asynchronous electric motor with the same output.
- Can be held stalled at full torque indefinitely, and accepts repeated starting and stopping without limitation.
- Torque, speed and direction of rotation can be changed easily using simple control methods.
- Output that automatically adjusts to match the applied load.
- Controllable over a wide speed range.
- Ideal for many applications in hazardous or hostile environments.
- Smooth start-up to minimize “shock” loading on transmission components.
- Unaffected by, and will not generate, electrical interference.



Features for LZB motors

Lubrication-free air motors for sensitive processes where hygienic operation is crucial

Equipped with low friction vanes and sealed bearings the lubrication-free motors release no lubricants into the air. They offer a viable drive solution for sensitive processes and hygienic environments where oil contamination would be at best a problem and, at worst, a catastrophe.

Stainless steel air motors for harsh and aggressive environments

The stainless steel air motors are ideal for harsh or even aggressive environments where hygiene is essential. They have a “clean” design with no pockets where dirt can collect. They are fitted with double shaft seals to prevent water from entering the gears. Lubrication-free versions are also available.

High torque air motors when a real workhorse is needed

Fitted with extra strong planetary gears the high torque air motors provide torques up to 680 Nm. The gears are dimensioned to stand being loaded at full stall torque indefinitely. Despite their strength the high torque air motors are compact compared to solutions with helical or worm gears. Lubrication-free versions are also available.

Customized air motors to your individual specifications

Whatever the requirement, Atlas Copco is always happy to help customers find solutions to their special needs. For OEMs, for instance, a customized air motor can be the most efficient solution when integrating an air motor into a machine or a tool. Special motors may have unique casings or mounting arrangements. They may utilize non-standard materials or surface coatings and be designed to achieve a specific output.

For more information on Atlas Copco vane motors see our air motor catalogue, Ordering No. 9833 8998 01.



Explosion proof certified versions

Our air motors are available in explosion proof certified versions, in compliance with the European Union's ATEX Directive on equipment for potentially explosive environments.

LZB**0.1 – 1.2 kW**

The Atlas Copco LZB vane air motors are compact in design, light in weight and available in a host of different gear ratios to meet a variety of speed requirements. They are particularly suited to be built into hand held machines and also many different types of industrial equipment.



	Max output		Speed at max output r/min	Torque at max output		Min start torque		Free speed r/min	No. of gear ratios	Motor diameter	
Model	kW	hp		Nm	ft lb	Nm	ft lb			mm	in
Non-reversible											
LZB14	0.16	0.22	330 - 9100	0.17 - 4.7	0.12 - 3.4	0.26 - 7	0.19 - 5.1	690 - 19500	5	27	1.1
LZB22	0.25	0.34	235 - 9600	0.25 - 9.9	0.18 - 7.3	0.45 - 17	0.33 - 12.5	510 - 21500	7	36	1.4
LZB33	0.39	0.52	10 - 9400	0.40 - 340	0.30 - 251	0.76 - 680	0.56 - 501	21 - 20000	17	42	1.6
LZB42	0.65	0.87	25 - 10500	0.59 - 236	0.44 - 174	1.10 - 430	0.80 - 315	50 - 21000	12	46	1.8
LZB46	0.84	1.13	25 - 10800	0.74 - 300	0.55 - 220	1.20 - 490	0.88 - 360	50 - 21000	12	46	1.8
LZB54	1.20	1.60	65 - 9300	1.20 - 175	0.88 - 129	1.80 - 250	1.30 - 180	125 - 18000	10	60	2.4
Reversible											
LZB14	0.10	0.14	230 - 6500	0.15 - 4.1	0.11 - 3.0	0.19 - 5	0.14 - 3.7	460 - 13000	5	27	1.1
LZB22	0.16	0.22	5 - 6500	0.24 - 10.8	0.18 - 8	0.35 - 13.4	0.26 - 9.9	5 - 13800	9	36	1.4
LZB33	0.24	0.32	7 - 7000	0.34 - 305	0.25 - 225	0.46 - 412	0.34 - 304	5 - 14000	21	42	1.6
LZB42	0.53	0.71	19 - 8100	0.62 - 250	0.46 - 184	0.70 - 270	0.52 - 200	37 - 16000	12	46	1.8
LZB46	0.62	0.83	20 - 8600	0.68 - 275	0.50 - 200	0.75 - 300	0.55 - 220	40 - 17000	12	46	1.8
LZB54	0.82	1.10	45 - 6800	1.20 - 165	0.88 - 122	1.20 - 165	0.88 - 122	90 - 13000	10	60	2.4

The LZB14, LZB22 and LZB33 models are available in lubrication-free versions. LZB14, LZB22 and LZB33 can be obtained in a stainless steel version. The standard non-reversible motors have clockwise rotation but can also be obtained with anti-clockwise rotation.

LZL**1.3 – 6.5 kW**

The Atlas Copco LZL vane motors are reversible air motors which have been designed to offer outstanding starting and low speed performance. These general purpose motors are powerful, durable and offer long service life.



Model	Torque at half free speed		Stall torque		Air consumption at half free speed ^a		Free speed r/min	Weight	
	Nm	ft lb	Nm	ft lb	l/s	cfm		kg	lb
LZL03 M	1.5	1.1	3.2	2.35	16	34	5800	2.9	6.4
LZL05 M	3	2.2	6	4.4	23	49	5000	3.9	8.6

^a Note that the air consumption in a typical mixing application normally is less than 50% of the values in the table.

LZL 03/05M – EX certified according to ATEX directive Ex II 2G T5 IIC D85° C.

LZL 03/05 available with IEC and Nema flange.

	Max output		Speed at max output r/min	Torque at max output		Min start torque		Free speed r/min	No. of gear ratios
Model	kW	hp		Nm	ft lb	Nm	ft lb		
Motor only									
LZL03 S	1.05	1.4	5300	1.9	1.4	2.8	2.05	11000	—
LZL05 S	1.3	1.7	4200	3	2.2	4.8	3.5	9000	—
LZL15	3.2	4.3	4500	6.8	5.0	10.9	8.0	7200	—
LZL25	5.0	6.7	4000	12.0	8.8	18.0	13.2	6000	—
LZL35	6.5	8.7	3100	20.0	14.7	32.0	23.6	5000	—
With helical gear unit									
LZL05	1.7	2.3	17 - 594	26 - 705	19 - 520	42 - 1112	31 - 820	37 - 1012	11
LZL15	3.2	4.3	17 - 495	58 - 1331	43 - 981	96 - 2134	71 - 1573	35 - 792	11
LZL25	5.0	6.7	14 - 438	103 - 2349	76 - 1732	159 - 3471	117 - 2560	29 - 657	11
LZL35	6.5	8.7	19 - 615	98 - 2459	72 - 1814	156 - 3935	115 - 2902	39 - 992	9
With worm gear unit									
LZL05	0.9	1.2	67 - 525	19 - 117	15 - 88	—	—	130 - 1030	7
LZL15	1.8	2.4	58 - 422	46 - 279	34 - 206	—	—	115 - 840	7
LZL25	2.8	3.8	44 - 361	82 - 571	60 - 421	—	—	90 - 740	7

LZL 03/05S – Can be Ex certified according to the ATEX directive Ex II 2G T2 IIC D240° C.

Air Motor Support

Customized air motors to your individual specifications

Whatever the requirement, Atlas Copco is always happy to help customers find solutions to their special needs. For OEMs, for instance, a customized air motor can be the most efficient solution when integrating an air motor into a machine or tool.

Special motors may have unique casings or mounting arrangements. They may utilize non-standard materials or surface coatings and be designed to achieve a specific output.



Select your air motor in 30 seconds!

Designed for Windows-based PCs, Atlas Copco has developed an Air Motor Selection Guide. It stores data on all of Atlas Copco's air motors.

The designer specifies the required torques and speed of the motor and within seconds the program chooses the optimum motor. It also supplies complete documentation with performance curves and motor data.

Ordering No. 9833 9093 00



Air motor drawing library

CAD-drawings of any of the hundreds of different Atlas Copco air motors are available to designers on CD or to download from Internet (in both .DXF and .IGS formats) from the Atlas Copco Air Motor Draw Library. These CAD-drawings can then be quickly and easily inserted into the designer's machine drawing.

Ordering No. 9833 1139 00



When more information is required

For further information on Atlas Copco vane motors please ask for a copy of our Air Motor catalogue,

Ordering No. 9833 8998 01

