Air motors

Contents

Atlas Copco 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:

AIR MOTOR FEATURES AND CHARACTERISTICS

- Leading the industry in development and innovation.
- Offering a comprehensive range of standard air motors.
- A premier supplier of air motors engineered to meet customer requirements.
- Delivering orders, on time, to customer schedules.
- Offering a truly worldwide service.

FEATURES FOR LZB MOTORS

Lubrication-free air motors

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 applications where oil mist must be avoided. For normal operations lubrication can still be used.

Stainless steel air motors for harsh and aggressive environments

Atlas Copco's stainless steel motors enlarge the field of applications to areas where the environment is corrosive. This can be in the food processing industries where corrosive detergents are used or in the chemical industry where the atmosphere as such is corrosive.

Atlas Copco's stainless steel motors have a "clean" design. Their smooth surfaces are cylindrical with no pockets where dirt can collect. The motors are easy to clean. The motors have double seals in Viton at the output shaft to prevent dirt and liquids from entering the motor gears. The seals also prevent the gear lubricant from leaking out. All external parts, including the output shaft, are made of stainless steel. The grease in the motor complies with NSF H1 and FDA 21CFR § 178.3570. For applications where there might be moisture in the compressed air the stainless steel LZB-motors can be equipped with a stainless steel motor cell as an option. With this option the motor becomes 100% stainless, both internal and external.

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.

CERTIFIED VERSIONS

Our air motors are available with certifikation as standard, in compliance with the European Union's ATEX Directive on equipment for potentially explosive environments.

LZB RANGE

0.1 – 2.80 KW

LZB Atlas Copco vane motors are compact, lightweight, and energy efficient. They are available in a variety of gear ratios to meet a large range of speed and torque requirements. They are particularly suitable for building into hand held machines, or indeed any industrial equipment.

Model	Max output kW	Max output hp	Speed range at max output r/min	Torque range at max output Nm	Torque range at max output ft lb	Min start torque range Nm	Min start torque range ft lb	Free speed r/min	No. of gear ratios	Motor diameter mm	Motor diameter in
Non-reversible											
LZB14	0.16	0.21	320-9100	0.17-4.8	0.13-3.5	0.23-8.5	0.17-6.27	700-19500	5	27	1.1
LZB22	0.27	0.36	210-9600	0.27-11.8	0.20-8.7	0.32-22	0.24-16.2	480-21500	7	36	1.4
LZB33/34	0.39	0.52	10-9400	0.40-349	0.30-257	0.69-680	0.51-502	20-19000	17	42	1.7
LZB42	0.71	0.95	23-10000	0.68-272	0.5-201	1.09-435	0.80-321	42-19000	12	46	1.8
LZB46	0.84	1.13	25-10800	0.74-299	0.55-221	1.20-485	0.88-358	45-20000	12	46	1.8
LZB54	1.20	1.61	70-10000	1.15-161	0.85-119	1.80-261	1.33-193	125-18000	10	60	2.4
LZB66	1.87	2.51	55-8200	2.2-308	1.62-227	3.2-456	2.4-336	110-16000	10	60	2.4
LZB77	2.80	3.75	80-1220	22-332	16-245	35-536	26-395	165-2600	7	100	3.9
Reversible											
LZB14	0.11	0.15	250-7000	0.15-4.3	0.11-3.2	0.24-6.9	0.18-5.1	490-13000	5	27	1.1
LZB22	0.16	0.21	5-7000	0.24-10.5	0.18-7.7	0.32-14	0.24-10.3	5-13100	9	36	1.4
LZB33/34	0.25	0.34	7-7000	0.34-300	0.25-221	0.46-412	0.34-304	10-13300	21	42	1.6
LZB42	0.53	0.71	19-8000	0.63-255	0.46-188	0.85-344	0.63-254	33-14200	12	46	1.8
LZB46	0.63	0.84	20-8500	0.71-287	0.52-212	0.96-388	0.71-286	35-15800	12	46	1.8
LZB54	0.82	1.10	47-6800	1.15-161	0.85-119	1.40-207	1.03-153	90-12000	10	60	2.4
LZB66	1.46	1.96	50-7500	1.9-259	1.4-191	2.4-337	1.8-249	90-13500	10	60	2.4
LZB77	2.40	3.22	80-1280	18-274	13.3-202	24-374	18-276	155-2300	7	100	3.9

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 RANGE

1.05 – 5.2 KW

LZL Atlas Copco vane motors are designed to give outstanding starting characteristics, and low speed performance. The range is rugged and constructed for a long service life. With proven design, the LZL has been the machine tool builder's choice for decades.

Model	Torque at 3000 r/min Nm	Torque at 3000 r/min ft lb	Power at 3000 r/min kW	Power at 3000 r/min hp	Stall torque Nm	Stall torque ft lb	Air consumption at 3000 r/min [a] l/s	Air consumption at 3000 r/min [a] cfm	Max allowed speed r/min	Weight kg	Weight lb
LZL03 M	1.3	0.95	0.41	0.55	3.3	2.4	16	34	3000	2.9	6.4
LZL05 M	2.0	1.5	0.63	0.84	5.8	4.3	25	52	3000	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 03/05 available with IEC and Nema flange. LZL05 also available in stainless steel.

Model	Max output kW	Max output hp	Speed at max output r/min	Torque at max output Nm	Torque at max output ft lb	Min start torque Nm	Min start torque ft lb	Max allowed speed r/min	No. of gear ratios
Motor only									
LZL03 S	1.7	2.5	7500	2.2	1.6	2.8	2.1	11000	–
LZL05 S	2.1	2.8	6300	3.1	2.3	4.8	3.5	9200	–
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 a	2.0	2.6	45-512	36-403	27-297	56-624	41-460	65-740	6
LZL15 a	3.0	4.1	26-389	74-1071	55-790	116-1668	86-1230	43-639	6
LZL25 a	4.8	6.4	25-370	128-1836	94-1354	192-2754	141-2031	36-531	6
LZL35 a	6.2	8.3	61-464	128-944	94-696	192-1417	141-1045	111-838	4

[a] Not ATEX certified.

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 WITH OUR WEB BASED MOTOR SELECTION PROGRAM

Use the web based Air Motor Selection tool to choose the correct motor for your application.

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.

Visit https://webbox.atlascopco.com/air-motor/ to access the program.

AIR MOTOR DRAWING LIBRARY

CAD-drawings of any of the hundreds of different Atlas Copco air motors are available to designers, just download (in both 2D and 3D formats) via Internet from Atlas Copco Drawing Library. These CAD-drawings can then be quickly and easily inserted into the designer's machine drawing.

WHEN MORE INFORMATION IS REQUIRED

For further information on Atlas Copco vane motors please ask for a copy of our Air Motor catalogue or browse to our Links and Downloads section on www.atlascopco.com to download the catalogue.