Compressor Technologies | Africa

LPM Series

www.bdcompressor.co.za

LPM Series

The LPM low-pressure compressor, maintains a low rotational speed while ensuring sufficient airflow, preventing energy waste during extended operation.

Support in B&D cloud

Single-Stage Screw Air Compressor

LPM Series

Application industry:

Mining, petroleum, chemical, power plants, cement, paper, textile, shipbuilding, electronics, machinery, manufacturing and processing, instrumentation,etc.

- Advanced in intelligent permanent magnet frequency conversion technology, with IP55 protection level, large rotor, low speed, long service life, and unique overall system optimization technology.
- Ultra low specific power, ultra high cost-effectiveness,first choice for subdivision industry customization,and strong adaptability to harsh working conditions.
- The "B&D Cloud" digital management system, with fault warning function, provides users with sufficient emergency preparedness, 24 hours uninterrupted continuous operation, free downtime maintenance.
- Equipped with intelligent air compression station management, which achieves multiple digital functions such as unmanned operation,intelligent joint control, energy conservation and consumption reduction, and automatic reporting.

Technical Parameter
LPM Series Low Speed Low Pressure Screw Air Compressor

Fixed configuration parameters | Power supply:380V/415V/440V/460V/3ph/50Hz/60Hz

Starting mode: Variable frequency start | Ambient temperature: -5~50℃ | Air discharge temperature: ≈Ambient temp.+15℃

Rated discharge pressure/Pressure range(Mpa):**0.2/0.1-0.2**

Model	Air capacity M³/min	Power Kw	Dimension(mm) L	W	H	Air Outlet Pipe Diameter	Weight Kg	Noise dB(A)	Lubricant L
BD-390LPM	5.15-12.88	37	1900	1250	1650	ZG2"	1400	68±2	72
BD-520LPM	5.97-14.94	45	2200	1550	1900	DN80	1800	72±2	120
BD-600LPM	8.24-20.6	55	2200	1550	1900	DN80	1800	72±2	120
BD-750LPM	11.95-29.87	75	3384	2140	2000	DN100	4100	78±2	188
BD-1100LPM	14.42-36.05	90	3384	2140	2000	DN100	4100	78±2	188
BD-1560LPM	18.54-46.35	110	4310	2140	2250	DN200	7800	80±2	308
BD-1900LPM	22.22-55.55	132	4310	2140	2250	DN250	8200	81±2	308
BD-2248LPM	25.12-62.8	160	4310	2140	2250	DN250	8800	82±2	308

Rated discharge pressure/Pressure range(Mpa):**0.25/0.1-0.25**

Model	Air capacity M³/min	Power Kw	Dimension(mm) L	W	H	Air Outlet Pipe Diameter	Weight Kg	Noise dB(A)	Lubricant L
BD-390LPM	4.53-11.33	37	1900	1250	1650	ZG2"	1400	68±2	72
BD-520LPM	5.15-12.88	45	2200	1550	1900	DN80	1800	72±2	120
BD-600LPM	7.83-19.57	55	2200	1550	1900	DN80	1800	72±2	120
BD-750LPM	11.74-29.36	75	3384	2140	2000	DN100	4100	78±2	188
BD-1100LPM	13.6-33.99	90	3384	2140	2000	DN100	4100	78±2	188
BD-1428LPM	16.07-40.17	110	3690	2140	2250	DN200	6800	80±2	188
BD-1560LPM	20.19-50.47	132	4310	2140	2250	DN200	7800	80±2	308
BD-2148LPM	24.28-60.7	160	4310	2140	2250	DN200	7800	81±2	308
BD-2378LPM	27-67.5	185	4310	2140	2250	DN250	8800	82±2	308

Rated discharge pressure/Pressure range(Mpa):**0.3/0.18-0.3**

Model	Air capacity M³/min	Power Kw	Dimension(mm) L	W	H	Air Outlet Pipe Diameter	Weight Kg	Noise dB(A)	Lubricant L
BD-390LPM	4.42-11.05	37	1900	1250	1650	ZG2"	1400	68±2	72
BD-520LPM	4.8-12	45	1900	1250	1650	ZG2"	1550	70±2	72
BD-600LPM	6.8-17	55	2200	1550	1900	DN80	1800	72±2	120
BD-750LPM	9-22.5	75	2200	1550	1900	DN80	2100	75±2	120
BD-1100LPM	12.2-30.5	90	3384	2140	2000	DN100	4100	78±2	188
BD-1268LPM	14.72-36.8	110	3690	2140	2250	DN200	6800	80±2	208
BD-1560LPM	18.8-47	132	3690	2140	2250	DN200	6800	80±2	208
BD-1900LPM	22.6-56.5	160	3690	2140	2250	DN250	7200	81±2	208

Technical Parameter
LPM Series Low Speed Low Pressure Screw Air Compressor

Fixed configuration parameters | Power supply:380V/415V/440V/460V/3ph/50Hz/60Hz
Starting mode: Variable frequency start | Ambient temperature: -5~50℃ | Air discharge temperature: ≈Ambient temp.+15℃

Rated discharge pressure/Pressure range(Mpa):**0.35/0.23-0.35**

Model	Air capacity M³/min	Power Kw	Dimension(mm) L	W	H	Air Outlet Pipe Diameter	Weight Kg	Noise dB(A)	Lubricant L
BD-390LPM	4.2-10.5	37	1900	1250	1650	ZG2"	1400	68±2	72
BD-520LPM	4.56-11.4	45	1900	1250	1650	ZG2"	1550	70±2	72
BD-600LPM	6.46-16.15	55	2200	1550	1900	DN80	1800	72±2	120
BD-750LPM	8.55-21.38	75	2200	1550	1900	DN80	2100	75±2	120
BD-1100LPM	11.59-28.98	90	3384	2140	2000	DN100	4100	78±2	188
BD-1230LPM	13.92-34.8	110	3690	2140	2250	DN200	6800	80±2	208
BD-1560LPM	16.08-40.2	132	3690	2140	2250	DN200	6800	80±2	208
BD-1900LPM	20.12-50.3	160	3690	2140	2250	DN250	7200	81±2	208

Rated discharge pressure/Pressure range(Mpa):**0.4/0.25-0.4**

Model	Air capacity M³/min	Power Kw	Dimension(mm) L	W	H	Air Outlet Pipe Diameter	Weight Kg	Noise dB(A)	Lubricant L
BD-390LPM	4.41-11.03	45	1900	1250	1650	ZG2"	1450	68±2	72
BD-520LPM	5.67-14.18	55	1900	1250	1650	ZG2"	1600	70±2	72
BD-600LPM	7.14-17.85	75	2200	1550	1900	DN80	2000	72±2	120
BD-750LPM	10.24-25.6	90	2200	1550	1900	DN80	2200	75±2	120
BD-1100LPM	12.4-31	110	3384	2140	2000	DN80	4500	78±2	188
BD-1348LPM	15.2-38	132	3384	2140	2000	DN80	4500	78±2	188
BD-1560LPM	18.8-47	160	3690	2140	2250	DN200	7100	80±2	208
BD-1780LPM	20-50	185	3690	2140	2250	DN200	7100	80±2	208
BD-1900LPM	22.68-56.7	200	3690	2140	2250	DN200	7400	80±2	208

Rated discharge pressure/Pressure range(Mpa):**0.5/0.3-0.5**

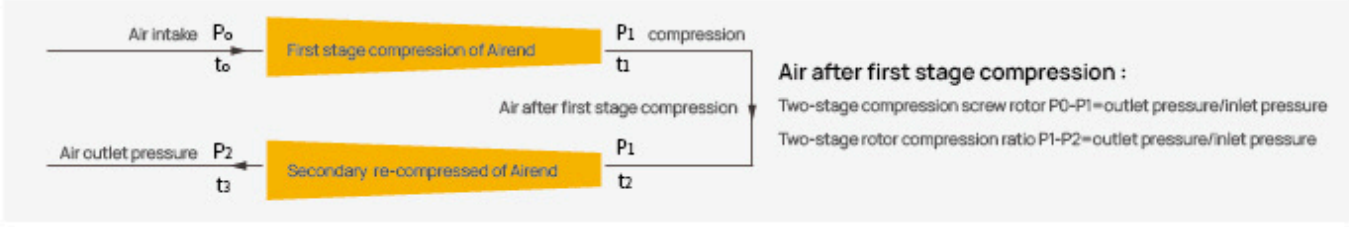
Model	Air capacity M³/min	Power Kw	Dimension(mm) L	W	H	Air Outlet Pipe Diameter	Weight Kg	Noise dB(A)	Lubricant L
BD-390LPM	4.2-10.5	45	1900	1250	1650	ZG2"	1450	68±2	72
BD-520LPM	5.4-13.5	55	1900	1250	1650	ZG2"	1600	70±2	72
BD-600LPM	6.8-17	75	2200	1550	1900	DN80	2000	72±2	120
BD-750LPM	9-22.5	90	2200	1550	1900	DN80	2200	75±2	120
BD-918LPM	10.4-26	110	3384	2140	2000	DN80	4500	78±2	188
BD-1100LPM	12.2-30.5	132	3384	2140	2000	DN80	4500	78±2	188
BD-1418LPM	16.26-40.65	160	3690	2140	2250	DN200	7100	80±2	208
BD-1560LPM	18.8-47	185	3690	2140	2250	DN200	7100	80±2	208
BD-1780LPM	20.22-50.55	200	3690	2140	2250	DN200	7100	80±2	208
BD-1900LPM	22.26-55.65	220	3690	2140	2250	DN250	7400	80±2	208

Advantages of Baldor Two-stage Compression Energy Saving Technology

Two-stage compression principle

The two-stage compression is to combine the first stage compression rotor and the sceond stage compression rotor into one casing, and directly transmitted through helical gears. Natural air enters the fisrt stage of compression through the air filter, mixes with a small amount of lubricant into the compression chamber, and compresses the mixed gas to the interstage pressure. The compressed gas enters the cooling channel and comes into contact with a large amount of oil mist, greatly reducing the temperature. The cooled compressed air enters the second stage rotor for secondary compression and is compressed to the final air discharge pressure. Afterwards, the compressed air is discharged through the air discharge flange to complete the whole compression process.

Compared to single-stage air compressor tends to be the most efficiency isothermal compression. At he same power, two-stage compression produces up to 15% more gas than single-stage compression, and saves 15% more energy than single-stage compression.



Technological innovation of secondary compression

01 **High efficiency rotor profile technology**

02 **Interstage cooling key technology:**
Multiple jet holes are installed on the compressed gas channel to form a mist jet curtain to achieve rapid cooling. The whole process is close to isothermal, with a good energy saving effect.

03 **System structure optimization technology:**
This includes pressure ration distribution optimisation technology, air discharge port optimisation technology, etc.

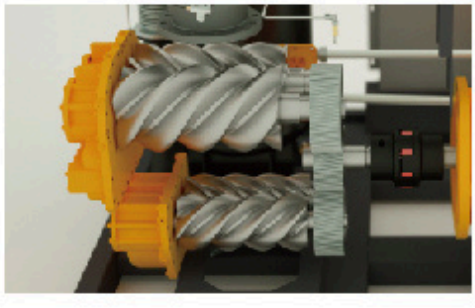
Introduction of high efficiency two-stage compression energy-saving airend

Airend compression system

01 The compression ratio of each stage has been precisely designed to reduce the loading on bearings and gears, extending the lifespan of the air-end. The patented lubricant system separates the compression chamber and bearing oil supply independently.

02 Small compression ration per stage, smaller leakage, high volumetric efficiency.

03 Under the same power, the load is borne by two air-ends, and the shaft bears less force, resulting in a longer lifespan.



High performance airend rotor

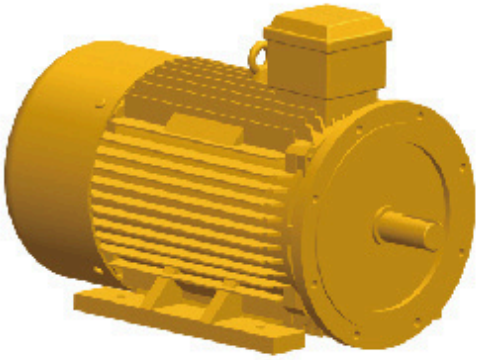
01 The air-end uses an innovative composite coating design, large rotor, low speed design, and contains two independent compression units.

02 Rotor adopts the latest designed UV patented rotor profile, which has undergone more than 20 precision machining processes to ensure the accuracy, reliability, and effectiveness of the rotor profile.

03 The primary compression rotor and the secondary compression rotor are combined into one casing, directly driven by the helical gear respectively, so that each stage of the rotor can obtain the best linear speed and the highest compression transmission efficiency.

Mature and reliable/durable/ high performance PM frequency conversion technology

BD is one of the leading manufacturers in the air compression industry to use intelligent permanent magnet frequency conversion technology. Our products have been tested by the market in a large number of applications, becoming a leading brand of intelligent permanent magnet frequency conversion air compressors.



01.High energy saving rate

Variable frequency speed regulation operation, synchronous motor has good efficiency, high power factor, wide efficiency range, and ensures extremely high operation efficiency throughout the whole speed regulation range, greatly improving the energy-saving rate.

02.Low noise

The permanent magnet synchronous motor has low operation noise. When the air compressor is operated at a variable frequency and reduced speed, the main engine noise is lower. The cooling fan adopts variable frequency control, further reducing the noise of the machine.

03.Stable air pressure

Fast and stable VSD speed regulation function, real-time adjustment of motor speed according to the actual gas consumption, control of air capacity to ensure stable gas supply pressure without overshoot.

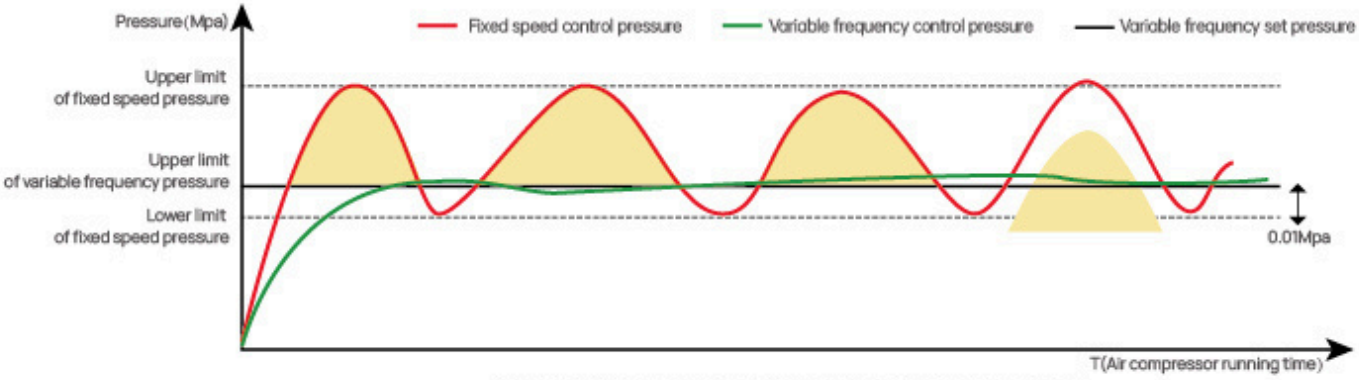
04.Smooth start/stop

The inverter adopts high-performance vector control, with high low-frequency torque and low starting current. Eliminated the impact on the power grid during startup, greatly reducing mechanical losses.

Comparision of variable frequency type and fixed speed

Energy saving is the biggest advantage of variable frequency compressor, especially when the range of user air volume fluctuations is more obvious, especially for two-stage compressors with loading/unloading regulation.

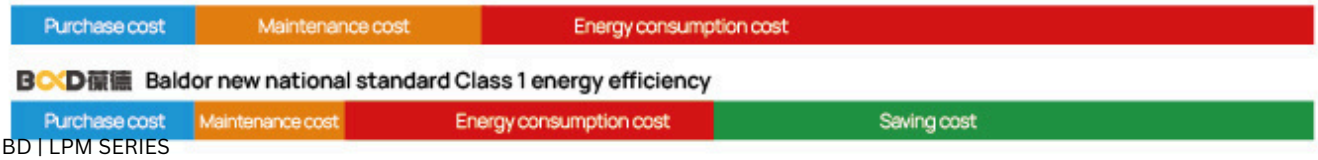
Throughout the entire operating frequency range, Baldor two-stage compressor can maintain the highest power factor, effectively preventing various problems caused by low power factor.



Comparision of variable frequency type and fixed speed

Comparison between Class 1 Energy Conservation and Class 2/Class 3 Energy Efficiency of the New National Standard.

One Class 2 or Class 3 energy efficient air compressor

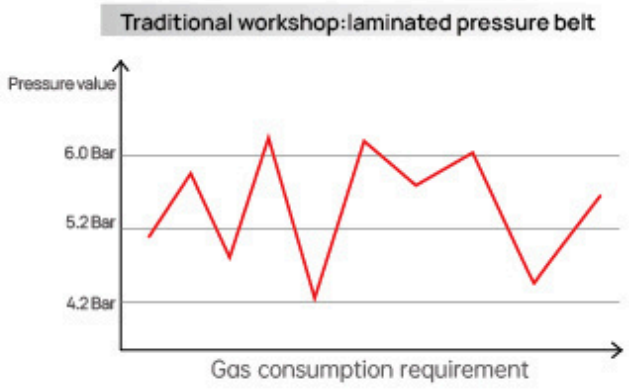


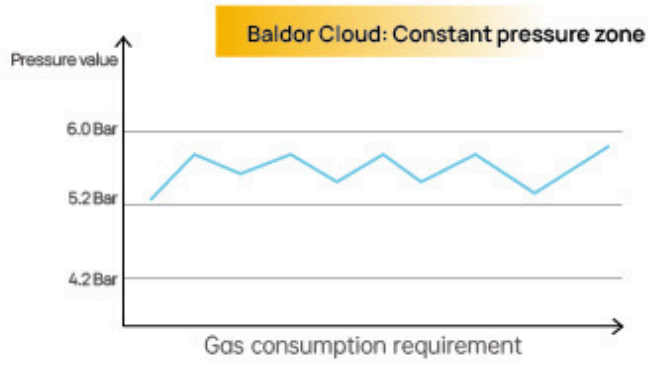
Baldor new national standard Class 1 energy efficiency

The air compressor station adopts leading digital and intelligent gas station management systems.

From single unit to system energy-saving, equipment utilization rate, unit energy consumption, cumulative power consumption, etc. The actual energy efficiency of single pressure band operation reduces equipment pressure difference, maintains constant pressure, reduces the ineffective energy consumption of the workshop, and achieves intelligent, digital, and humanized scientific energy saving of the whole air compressor station.

Equipped with "B&D Cloud" digital air compressor station to realize constant pressure gas consumption and digital intelligent management.





BD Compressor Technologies Africa 2024 Catalogue

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