



BE A LEGEND OF RAPIDITY

Baldor EPM-II Two-Stage Tandem Screw Air Compressor

22~132kW



B&D Technology

Digital Intelligent Demonstration Factory

Guangdong Baldor Holding Group (here in after referred to as B&D company) was established as Foshan XDS Electromechanical Co.,Ltd in 1999, then integrated with R&D, manufacturing, sales and IOT system of compressors. We are a national high-tech enterprise, and are awarded as Energy Saving Compressor Technology Center both in Guangdong Province and GMPI (national General Machinery Products Inspection center).

B&D company is the first air compressor manufacturer to achieve full-chain digitization in the industry. From the equipment management at the dealer's sales side, to the full tracking of the factory's internal material procurement equipment production, order delivery, logistics progress and the after-sales service management can all be checked from our B&D cloud. We aim to establish an intelligent and innovative industrial compressor brand with new concept.



The Smart Choice For Enterprise Energy-saving Transformation

- Baldor EPM-II two-stage tandem compression air end can up to the new national standard Class 1 energy efficiency.
- Replacement for those air compressors with high energy consumption or substandard performance.
- Compared with single-stage compression, tandem two-stage compression has at least 20% energy saving.
- Eco-friendly silent, mature technology and reliable performance.
- Equipped with energy efficiency monitor and health monitor to help you save energy, reduce consumption and provide precise management.
- New digital management system, intelligent sharing, human-machine integration



We cherish your trust

and protect your enterprise's production with good quality, good cost performance and good service.



Baldor professional team: concentrate on R&D.



Scientific structure design: achieving optimal energy saving



Baldor intelligent manufacturing factory: professional quality and inventiveness



Before delivery: no less than 120 minutes of rigorous testing



CCTV reported Baldor: energy conservation leads high-quality development of manufacturing industry

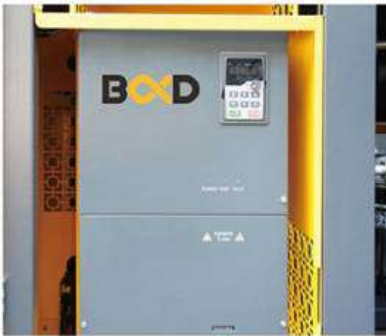


Application cases: achieve ideal and reliable energy-saving effects

Two-stage compression is recognized as energy-saving, mature in technology, stable and reliable.

01. VSD + Electrical box

VSD compressors are more energy-saving. Electronics stay well cooled, extending their service life. The frequency converter is placed independently of the control box to allow good heat dissipation. The inverter is placed independently of the control box to allow good heat dissipation.



02. Digital Control System

The digital BD cloud system has powerful management functions and humanized operations, and has built-in perfect algorithms to reduce system pressure and energy loss.



03. High Efficiency Cooler

The ultra-large heat exchange area design improves cooling efficiency and effectively prevents the machine from high temperatures. The inner wall is anti-corrosion treated, making it suitable for worse working conditions and extending the service life.



04. Oil-air Separator

The super-capacity separator has a precisely calculated and efficient cyclone separation structure design and is equipped with an efficient core. The separation efficiency is high and the oil content is largely reduced.





05. Large-diameter low-speed Axial Flow Fan

The axial flow cooling fan adopts variable frequency control. According to the exhaust temperature value, the operating speed of the fan is automatically controlled, reducing power waste and fan noise.



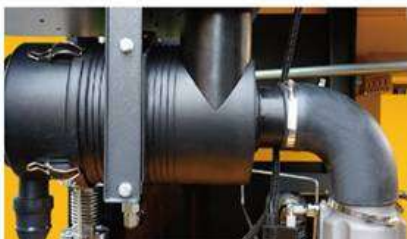
06. Energy-efficient Permanent Magnet Motor

High-efficient aluminum-shell permanent magnet oil-cooled motor has good cooling effect and reliable oil circuit sealing. No no-load waste, wide speed range, compact structure, low noise, saving electricity costs for users.



09. Air Filter

The original imported air filter is specially customized for various harsh working conditions, with cyclone air intake, and filtration accuracy as high as 99.9%.



08. Oil Filter

The spin-on oil filter uses high-end materials for aviation filtration, which is more effective than conventional filter and effectively extends the service life of the airend.



07. Horizontal Tandam Two-stage Compression Airend

Horizontal tandam two-stage compression airend has low center of gravity and compact structure. It is made of high-quality materials and is casting molding to reduce operating vibration. Compact structure, no leakage, transmission efficiency 90%.



Technical Parameter of Tandam Two-stage Air Compressors

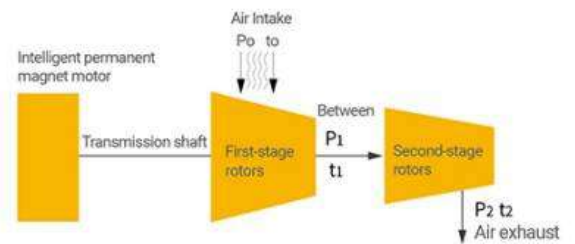
MODEL	Free Air Delivery / Discharge Pressure	Air discharge capacity (M ³ /min)	Power kW	Dimension L*W*H(mm)	Air outlet pipe diameter inch	Weight kg	Noise	Lubricant L
BD-22EPM-II	0.7/0.6-0.8	1.68-4.2	22	1295*910*1250	ZG1¼"	400	80±2	15
BD-37EPM-II		3.04-7.6	37	1498*1092*1480	ZG1½"	610	79±2	22
BD-55EPM-II		5.08-12.7	55	1695*1342*1740	ZG2"	960	85±2	37
BD-75EPM-II		6.6-16.5	75	1898*1442*1895	ZG2"	1200	85±2	57
BD-90EPM-II		8.08-20.2	90	2198*1642*2015	DN80	1450	88±2	100
BD-110EPM-II		9.68-24.2	110	2198*1642*2015	DN80	1500	88±2	100
BD-132EPM-II		11.2-28.0	132	2198*1642*2015	DN80	1600	88±2	100
BD-22EPM-II	1.0/0.8-1.0	1.52-3.8	22	1295*910*1250	ZG1¼"	400	80±2	15
BD-37EPM-II		2.72-6.8	37	1498*1092*1480	ZG1½"	610	79±2	22
BD-55EPM-II		4.56-11.4	55	1695*1342*1740	ZG2"	960	85±2	37
BD-75EPM-II		5.68-14.2	75	1898*1442*1895	ZG2"	1200	85±2	57
BD-90EPM-II		7.16-17.9	90	2198*1642*2015	DN80	1450	88±2	100
BD-110EPM-II		8.32-20.8	110	2198*1642*2015	DN80	1500	88±2	100
BD-132EPM-II		9.44-23.6	132	2198*1642*2015	DN80	1600	88±2	100

Advantages of Baldor Two-stage Compression Energy Saving Technology

Two-stage compression principle

The tandem two-stage compression combines the first-stage compression rotor and the second-stage compression rotor in one machine, and they are directly driven through helical gears. Natural air enters the first stage of compression through the air filter, mixes with a small amount of lubricating oil in the compression chamber, and simultaneously compresses the mixed air to the interstage pressure. The compressed gas enters the cooling channel and comes into contact with a large amount of oil mist, thereby greatly reducing the temperature. The cooled compressed air enters the second-stage rotors, undergoes secondary compression, and is compressed to the final exhaust pressure. Finally, it is discharged from the compressor through the exhaust flange to complete the entire compression process.

Compared with single-stage compression, two-stage compression is close to the most power-saving isothermal compression. At the same power, two-stage compression can produce up to 15% more air than single-stage compression. Two-stage compression saves 15% more energy than single-stage compression.

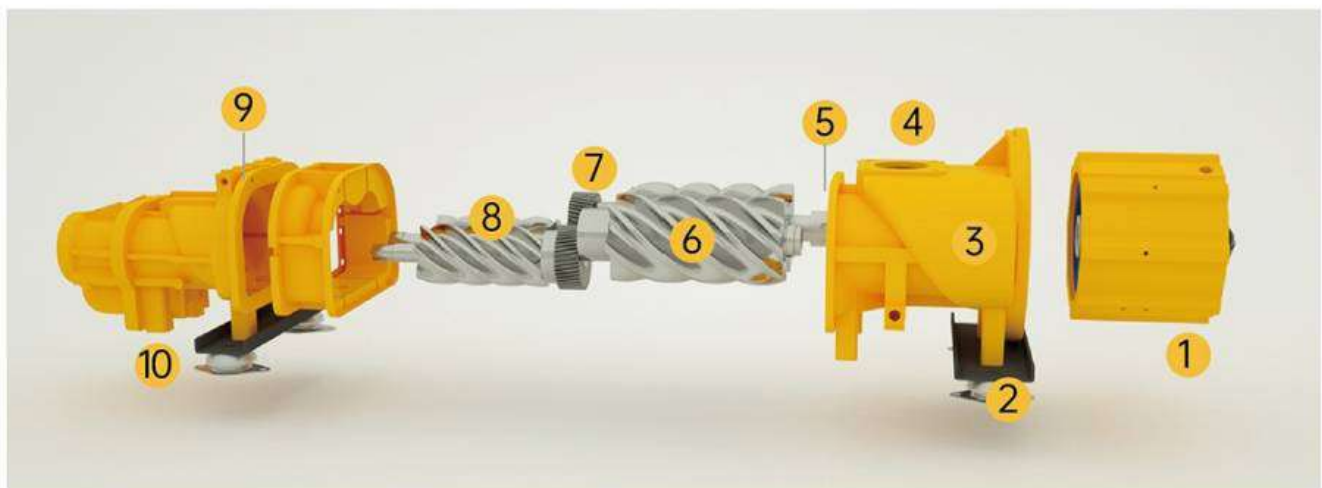


Tandem two-stage compression screw rotors:

First stage compression ratio P_0/P_1 =outlet pressure/inlet pressure

Second stage compression ratio P_1/P_2 =outlet pressure/inlet pressure

Tandem Two-stage Compression Energy-saving Technology innovation



- 1 Intelligent permanent magnet motor**
High-efficient aluminum-shell permanent magnet oil-cooled motor, durable, reliable, energy-saving
- 2 Fastened base design**
Strong and stable, with minimal vibration.
- 3 Airend made of high quality aluminum shell**
High temperature resistance, excellent sound insulation and sealing properties.
- 4 Air intake**
Scientific and reasonable diameter ensures air intake.
- 5 Transmission shaft**
The motor efficiency is transmitted to the rotor with good balance.
- 6 First-stage rotors**
The steel rotor has high meshing degree, long life and more wear resistance.
- 7 Synchronized gear**
High rotation efficiency and high matching density.
- 8 Second-stage rotors**
Steel rotors for secondary compression.
- 9 Oil injection between two compression**
Air cooling, oil injection for shaft and secondary compression.
- 10 Air outlet**
After being compressed, the oil-air mixture is discharged from the discharge port.

Reliable/durable/high-performance permanent magnet frequency driven technology

Baldor is one of the earliest manufacturers in the air compressor industry to use intelligent permanent magnet frequency driven technology. After many optimizations and upgrades, its products now have mature technology. Its products have been tested by the market and have a large number of applications from users, and have now become the recognized leading brand in air compressors.

01. High power saving rate

Frequency conversion speed regulation operation makes the synchronous motor more efficient. The power factor is high and the efficiency range is wide, ensuring extremely high operating efficiency within the entire speed range and greatly improving the power saving rate.

02. Low noise

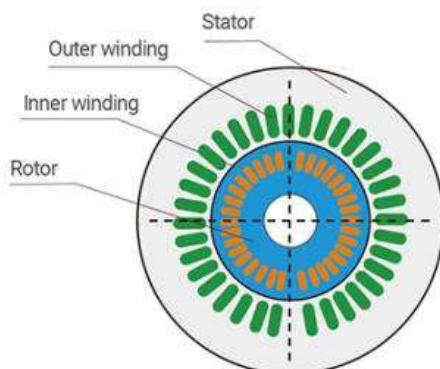
The permanent magnet synchronous motor operates with low noise. When the air compressor is driven by frequency conversion and speed reduction, the aircend noise is lower. The cooling fan adopts variable frequency control, which further reduces the noise of the whole machine.

03. Stable air pressure

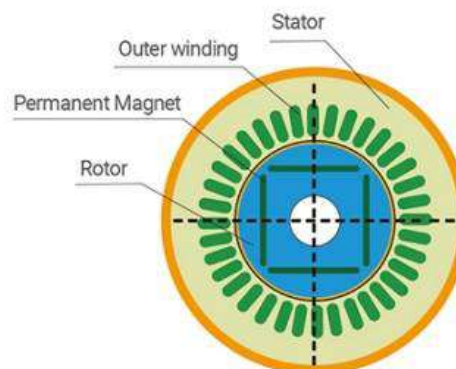
The fast and stable VSD speed regulation function can adjust the motor speed in real time according to the actual air consumption, control the exhaust volume, and ensure that the air supply pressure is stable without over-regulation.

04. Smooth start & stop

The frequency converter adopts high-performance vector control, with large low-frequency torque and small starting current. It eliminates the impact on the power grid during startup and greatly reduces mechanical losses.



General Induction Motor



Baldor Permanent Magnet

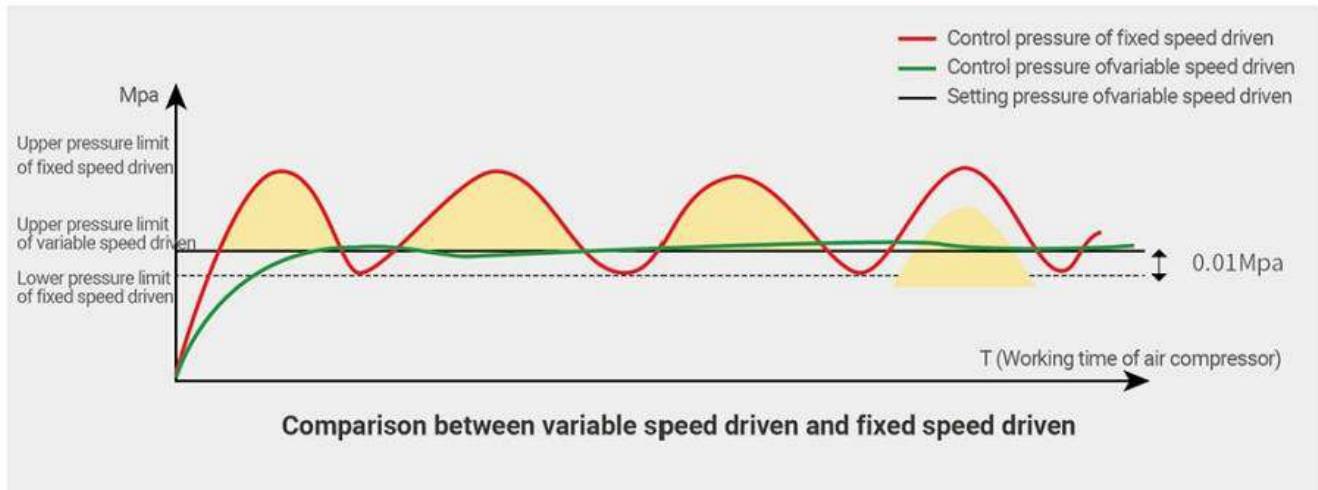
Oil-cooled motor, more efficient, quieter and more stable

More energy-saving, reducing production costs for users

Baldor's tandem two-stage air compressor provides users with a more cost-effective air consumption. The newly designed aircend provides higher efficiency and more reliable stability, ensuring that the user's air compressor operates with lower energy consumption, with an average energy saving of more than 30% or more.

Comparison between variable speed driven and fixed speed driven

Energy saving is the biggest advantage of the variable frequency compressor. When the user's air consumption fluctuates, the energy saving is more obvious. Especially for loading/unloading, the tandem two-stage compression can maintain the highest power factor within the entire operating frequency range and prevent various problems caused by too low power factor.



Baldor Tandam Two-stage Compression, Class 1 Energy Saving for All Series



Comparison between Class 1 and Class 2-3 energy efficiency



Digital driving saves energy and reduces consumption (Energy efficiency monitor)

Description: Display the unit's input power, current, voltage, cumulative power, and unit's air supply volume on the controller and mobile phone. Baldor Intelligent Monitor provides you with the power consumption data of the unit during peak and flat periods. Analyze unit energy consumption in terms of time and production capacity, and provide you with equipment usage recommendations. Provide you with energy consumption indicators of users in the same industry.

■ The monitoring section includes:

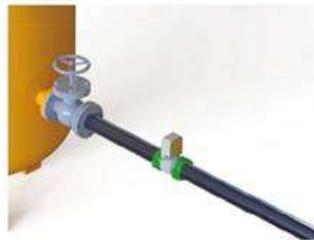
Electricity meter

Real-time detection of input voltage, current, electricity, power, accumulated electricity and other parameters of the unit.



Flow meter

Real-time detection of air supply volume, pressure and other parameters of the unit



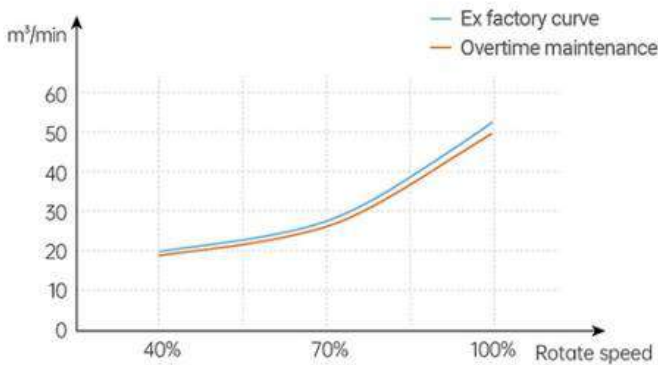
Functions & Advantages

Objective	With the increase in energy cost and the improvement of environmental awareness, improving equipment energy efficiency and reducing energy consumption have become the important goals for enterprises.				
Function Value	Reduce consumption	Cost reduction	Social benefits	Carbon footprint	Management support
Visible Energy Efficiency	Charts & Reports				
Strategic Analysis	Electricity efficiency analysis	Power quality analysis	Electricity load forecast	Capacity unit consumption analysis	
	Time-sharing energy usage analysis	Unit energy consumption ranking	Energy consumption benchmarking analysis	Unit energy consumption comparison	
【Automatic Service】 Energy consumption warning	Energy consumption off-limit alarm	Battery abnormality reminder	Battery consumption reminder	Equipment status alarm	Network communication alarm
【Automatic Service】 Energy consumption diagnose	The system provides regular energy consumption analysis reports. Based on the monitoring data, analyze the energy consumption, analyze historical data, find out the rules and trends of energy consumption, identify potential energy waste problems, and provide corresponding solutions or improvement suggestions.				
【Automatic Service】 Energy consumption forecast	Based on historical and real-time data, considering industry, weather, season, temperature, humidity, equipment status and operation plan, the future energy consumption of equipment is predicted, and data support is provided for enterprises to formulate reasonable energy management strategies. For example, the prediction of a single device can be converted into the load prediction and energy consumption prediction of the entire plant for the next month. Predict the degree of energy consumption decline, such as how many months in the future it will decrease from first-level energy consumption to second-level energy consumption, and corresponding maintenance needs to be done in the middle.				

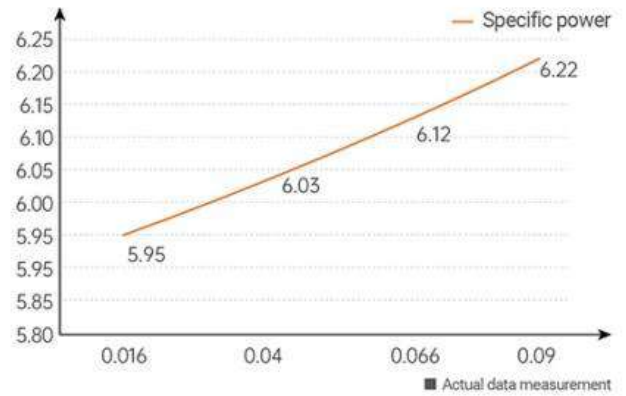
Comparison of Measured Data from Energy Efficiency Monitor

At present, most domestic enterprises rely on manual meter reading or monthly meter reading for air compressor energy consumption management. This method of manual calculation has problems such as data lag, poor timeliness, and single data. It cannot grasp the changes in real-time energy consumption of the air compressor. Baldor Intelligent Energy Efficiency Monitor monitors dynamic air compressor energy consumption information online, generates energy efficiency KPI, energy consumption daily reports, energy consumption health status, unit energy consumption data, energy consumption change trends, real-time operating parameters and other information. And scientifically analyze these energy consumption data to provide suggestions for energy saving and consumption reduction.

■ Comparison of energy efficiency before and after maintenance



■ Calculated based on the specific power trend of 110kw two-stage compression oil loss



■ Partial function display



- 
 Energy saving
- 
 Energy consumption monitoring
- 
 Energy consumption KPI
- 
 Energy consumption log
- 
 Energy consumption management
- 
 Energy consumption health

Digital driving saves energy and reduces consumption (Health monitor)

Baldor EPM-II Two-Stage Tandem Screw Air Compressor is equipped with a health monitor function, which installs sensors on the core components to collect the operating status. It achieves precise positioning of fault sections and fault points, early warning of faults, and early warning of air compressor abnormality information, providing rich operating logs and data for fault analysis. This prevents shutdown failures and ensures the stable operation of the air compressor system.



Baldor Health Monitor Function Overview

Status Overview	Parts data	Record	Visual structure	Energy efficiency monitoring
Health Management	Predictive maintenanc	Data visualizationce	Health diagnosis	Health Report
Failure prediction	Historical data	Failure notification	Real-time warning	Abnormal findings
Process management	Equipment ledger	Remote management	Life cycle	Maintenance reminder

Benefit predictions given by Health Monitor

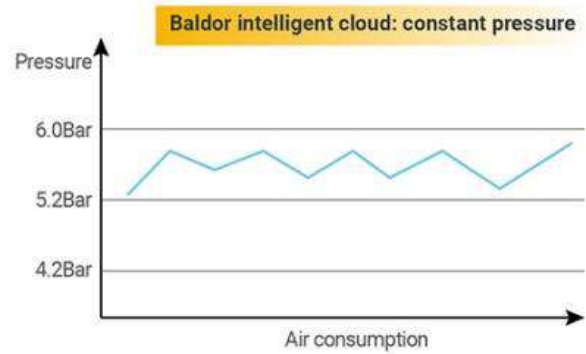
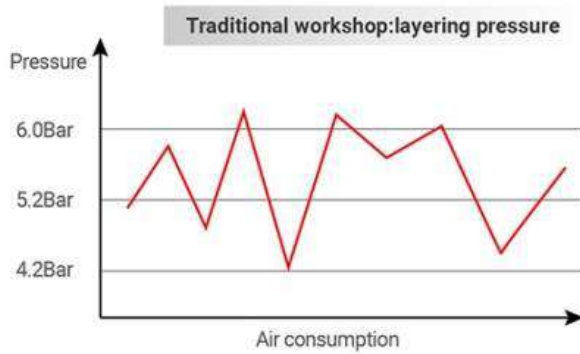
 <p>-30% Reduced user maintenance costs</p>	 <p>+300% Improved management efficiency</p>	 <p>+90% Improved maintenance quality</p>
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Digital and intelligent air station management system can be adopted.

Energy saving from single unit to a whole system, equipment utilization rate, unit energy consumption, cumulative power consumption, etc. Single pressure enables actual energy efficiency in operation and reduces equipment pressure differentials. Constant pressure reduces ineffective energy consumption in the workshop and achieves intelligent, digital and humanized scientific energy saving for the entire site.



Baldor digital air compressor station can realize constant pressure air consumption and digital intelligent management.



■ We know very well that what you need is an overall energy-saving air solution, not an air compressor.



Baldor Two-stage Compression Series



High-efficient Air Dryer



Air Tank



Desiccant Air Dryer



Precision Filter/
Full Performance Connectors



Waste Heat Recycle





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