Compressor Technologies | Africa

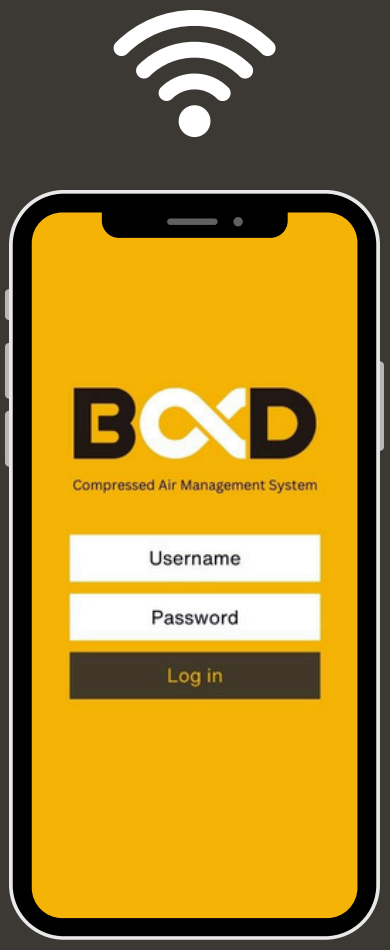
EPM-II Series

www.bdcompressor.co.za

EPM-II Two Stage Compressor

Two-stage compression is recognised for its energy efficiency, technological maturity, and reliable stability.

Digital Intelligent Management



24 Hours real-time management

BD Cloud Intelligent management system is equipped with high temperature alarm, over-pressure alarm, and other warning functions

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

01.VSD + Electrical box

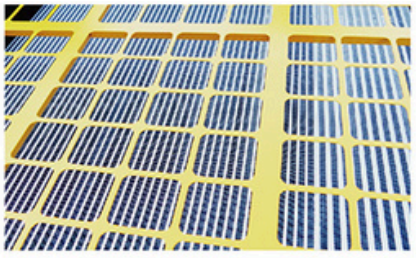
VSD compressors are more energy-saving. Electronics stay well cooled, extending their service life. The frequency converter is placed independently of the control box to allow good heat dissipation.

02. Digital Control System

The digital BD Cloud system has powerful management functions that is user friendly with perfect built-in 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 unner wall is anti-corrosion treated, making it suitable for harsh 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 equipped with an efficient core. The separation efficiency is high and the oil content is largely reduced.

EPM-II Series

MODEL	Free Air Delivery / Discharge Pressure	Air discharge capacity (M³/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

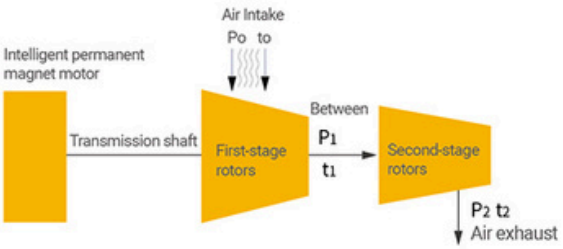
Two-stage compression principle

The tandem two-stage compression combination 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 tot he final discharge pressure.

Finally it is discharged from the compressor through the exhasut flange to complete the entire compression process.

Two stage compressor offers improved compression over single stage compression with greater power saving. At the same power, two-stage compression can product up to 15% more air than single-stage compression.

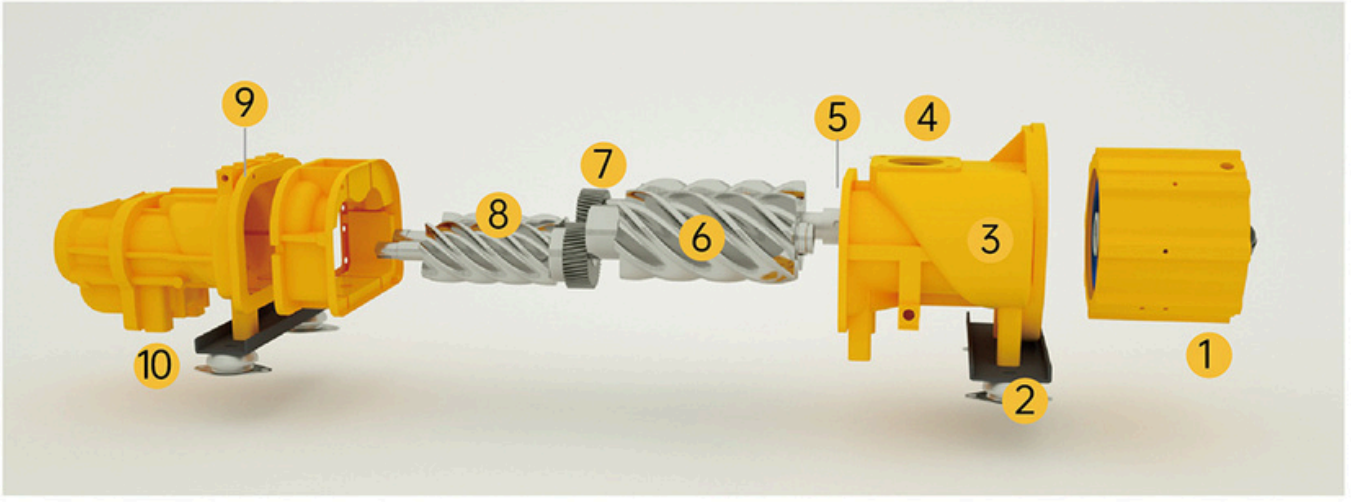


Tandam two-stage compression screw rotors:

First stage compression ratio P0-P1=outlet pressure/inlet pressure

Second stage compression ratio P0-P1=outlet pressure/inlet pressure

Tandam Two-stage Compression Energy-saving Technology innovation



01 Intelligent permanent magnet motor
High-efficient, aluminium shell, IP65 oil-cooled PM motor, durable, reliable, energy-saving

02 Fastened base design
Strong & stable, with minimal vibration

03 Air-end made of high quality aluminium
High temperature resistance, excellent sound insulation & sealing properties

04 Air-end made of high quality aluminium
Detailed R&D is conducted to ensure the optimisation of air flow through the intake.

05 Transmission shaft
efficiently transfers motor power to the rotor, ensuring optimal balance.

06 First state rotors
The steel rotors have a high degree of meshing, improved wear resistance for longer life.

07 Synchronised gear
High rotational efficiency and matching density.

08 Second-stage rotos
Steel rotors to mirror the first stage performance.

09 Oil injections between compression stages
Combined air cooling and oil injected spray curtain

10 Air outlet
After compression , the air/oil mixture is expelled through the discharge port for separation.

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

Baldor (BD) is one of the first manufacturers in the industry to use intelligent permanent magnet frequency driven technology. After numerous engineering upgrades, BD offers equipment with technology. Its products have been tested by the market and have a large number of applications from users, and have now become the recognised leading brand in air compressors.

01. High power saving rate

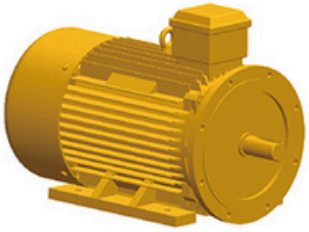
Frequency conversion speed regulation operation makes the synchronous motor more efficient. The power factor is high and the efficiency range is wide, ensuring extremely high operating efficiency within the entire speed range and greatly improving the power saving rate.

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 airend noise is lower. The cooling fan adopts variable frequency control, which further reduces the noise of the whole machine.

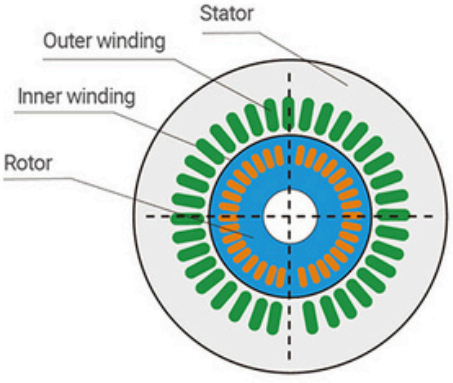
03. Stable air pressure

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.

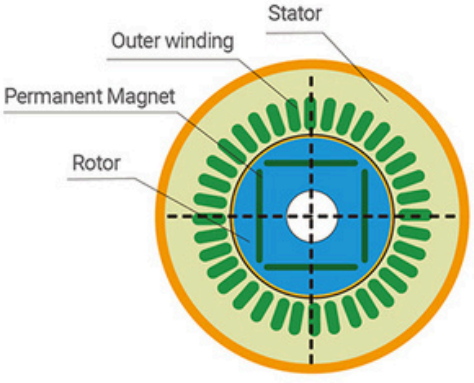


04. Smooth start & stop

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 Permanet Magnet

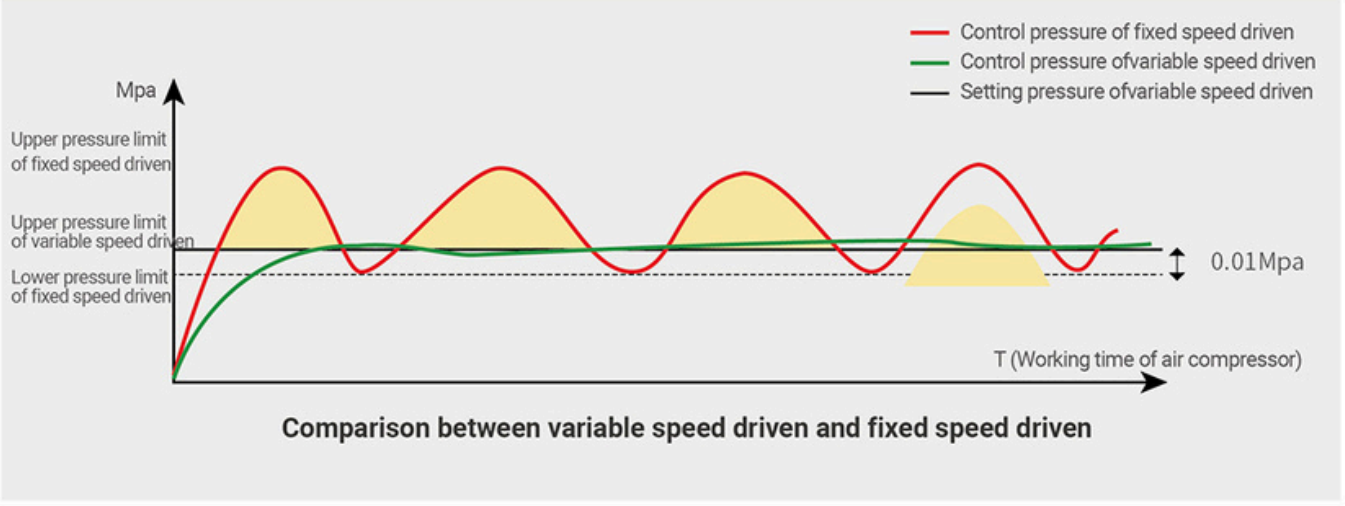
Oil-cooled motor, more efficient, quieter and more stable

More energy-saving, reducing production costs for users

BD's tandem two-stage air compressor provides users with a more cost-effective air consumption. The newly designed air-end provides higher efficiency and more reliable stability, ensuring that the suer's air compressor operates with lower energy consumption, with an average energy saving of 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 tandam 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.



Comparison between variable speed driven and fixed speed driven

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

Comparison between Class 1 and Class 2-3 energy efficiency

BD Compressor Technologies Africa 2024 Catalogue

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