Professional
Screw Air Compressor Factory

OLYMTECH

SCREW
AIR COMPRESSOR

Industrial Type Permanent Magnet VSD

2023 new arrival

OLYMTECH

7.5-132 KW

OLYMTECH

CPM Series

Permanent Magnet Motor
VSD Screw Air Compressor

C Series

Permanent Magnet Motor
Variable Speed Screw Air Compressor

Permanent Magnet Synchronous Motor(PM)
Adopts the high efficiency NdFeb permanent magnet,
The service life is more than 15 years.

Stator Coil
Using the wire which is specialized in the inverter.
Excellent insulation, longer service life.

When the use of air is not stable, average energy saving reaches to 35-50%.

Reduce the working pressure of the system.
The constant voltage is more efficient.

No power consumption when it is unloading .
No unloading,
No electricity waste.

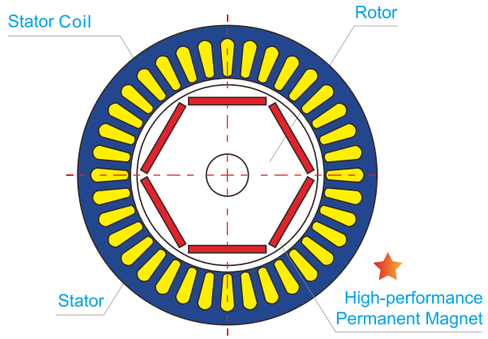
Permanent magnet synchronous motor for higher efficiency.

Wider range of the AC voltage(300V-440V).
The compressor can run normally and it won't stop in this range.

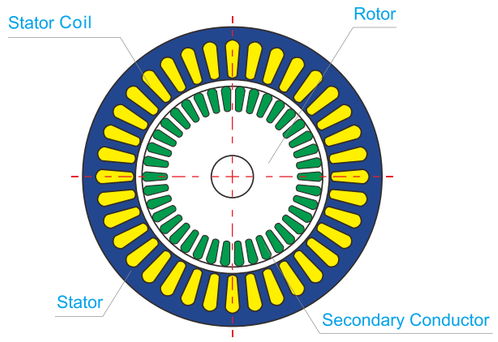
Can adjust the discharge air volume according to the air pressure.

Colour touch screen
Customised smart touch screen and control module .Easy to operate.

Comparison(Permanent Magnet Synchronous Motor & Normal Asynchronous Motor)



Permanent Magnet Synchronous Motor



Asynchronous Induction Motor

Magnetic field is the foundation of the motor to realize the electricity energy conversion.
Depending on the way to establish the magnetic field, it divides into the electric excitation motor and permanent magnet motor.
Compared to the electric excitation motor, the permanent magnet motor has the advantages as below,

High Efficiency

It cancels the loss of the excitation system which improves efficiency 5%-12% .
The power factor is high , the force ratio of inertia is high.
The motor is in directed drive, without the speed slip loss, No need for the bearing and connection to drive, that can improve more than 3% efficiency.
When in light loading, the PM motor can improve 15-35% efficiency as the same specifications of induction motor. High efficiency in light or heavy load.
At present, Olymtech is use the level 1 energy saving PM motor. (le3)

Low Noise

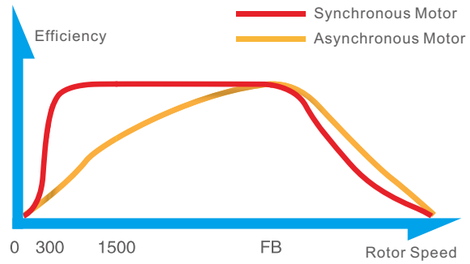
With the design in magnetic field,magnetic density distribution,wider working frequency range ,lower operation noise.
The air pressure is constant, open loop vector control, it can adjust a wide range of discharge air volume immediately.

Compact Structure ,Small Size,Light Weight

It cancels the excitation winding and the excitation power (magnetic pole core).
The structure is simple ,reliable operation and easy maintain.

High Precision, Fast Response

Bigger Starting Torque



Synchronous Motor and Asynchronous Motor Efficiency Curve

Compared with the fixed speed compressor, PM VSD compressor can save electric charge more than

74,000 degree/year.

10836kw.h + 52800kw.h + 10836kw.h =74472kw.h/year

(Above data is the 37kw screw air compressor Industry data, your factory actual saving value is depends on actual using condition .)

Energy Saving Solution

35%

Smart inverte

A wide speed control range of frequency converter prevents unnecessary power consumption for no-load operation.

2-5%

Permanent magnet motor

High efficiency IE3 permanent magnet motor reduces energy costs.

3-15%

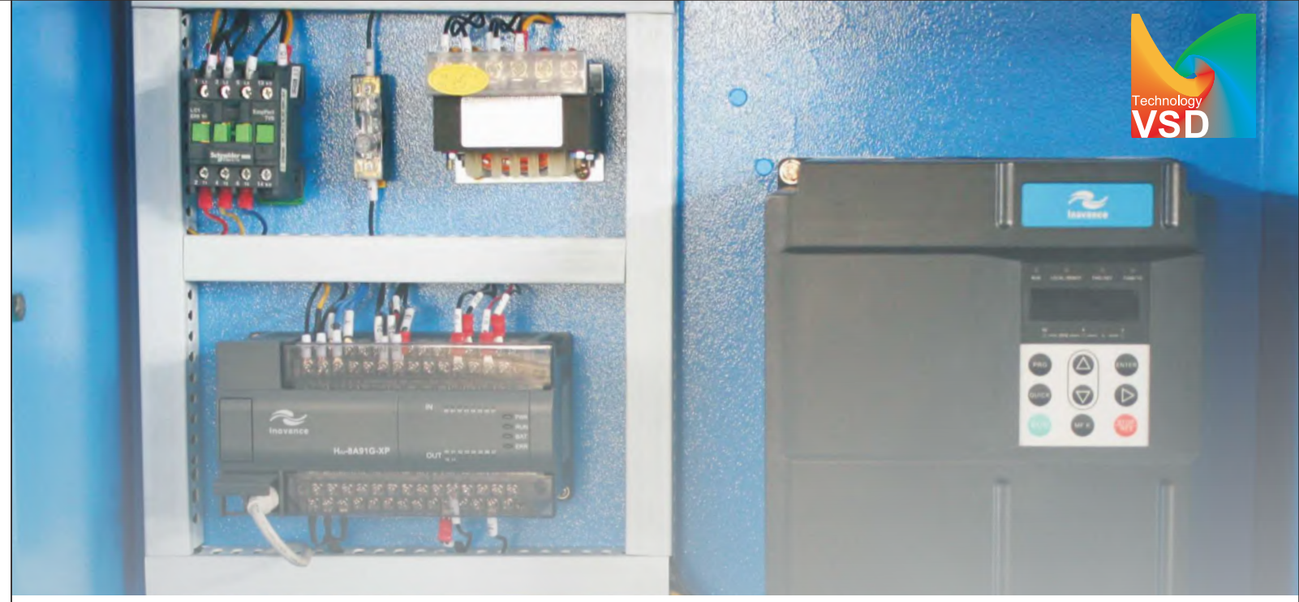
No unnecessary pressure

Constant pressure setting reduce the pressure drop, 1bar of unnecessarily high pressure correopnds to about 7% of the energy.

1-10%

Lossless direct drive

The direct connect in between the air-end and motor has none of the transmission losses.



1 Application of Permanent Magnet Motor

- Olymtech uses the high efficiency permanent magnet synchronous motor. Compared with the normal asynchronous VSD motor, energy saving performance is more outstanding. The full load efficiency of a 37Kw PM motor is 97%, however the efficiency of same level asynchronous motor is only 92% ,it may save 5% energy.
- It can save electricity about 10836 degree/year when we use the PM compressor in 37KW.
  When in low speed, the permanent magnet synchronous motor efficiency won't be changed, but normal asynchronous motor efficiency will be lower. **Average PM compressor can save energy 7%-11%.**
- 37KW means the shaft power of the main motor. The actual input power is (37kw x 1.15 service factor) =43KW. If the compressor works for 6000 hours per year, 60% loading rate:
  1year electric saving:
  6000h x 43kw x 60% (loading rate) x7% = 10836kw.h
  Suspect electric charge USD0.2/kw.h, 1year save money:**10836kw.h x USD0.2/kw.h = USD2167.00**

2 Application of VSD Technology

- When air compressor unloads, it consumes electric power approximately 50% but giving you nothing in return.
- For example a 37Kw compressor, if the loading rate is 60%, it means the unloading rate is 40%, it will waste 22kw when in unloading (full load is 37kw x 1.15 service factor x 50% =22kw). If the compressor runs 6000 hours per year, this compressor has 40% unload, it consumes 22kw power during the 2400hours, it may waste electricity in **52800kw.h**
  6000h x 40% (unloading rate) x 22kw = 52800kw.h
- To use Olymtech PM compressor C37PM, wastage problem is solved, you can save electric 52800kw.h/year! Because Inverter automatically adjusts the motor speed, thus to changes the air supply as the air demand floating, no unloading wastage.
  * Above data is the Industry data, the actual saving value depends on actual use.

3 Without Pressure Loss

- A compressor pressure is 0.8Mpa, it's actual unloading pressure is 0.8Mpa, and the loading pressure is 0.65Mpa, that means pressure 0.65Mpa is enough for factory using.
- Adjust C37PM pressure to 0.65Mpa, which can save electricity 11340kw.h/year.
- To reduce system pressure every 0.14barg, it can save 1% energy. This equates 7% as an example.
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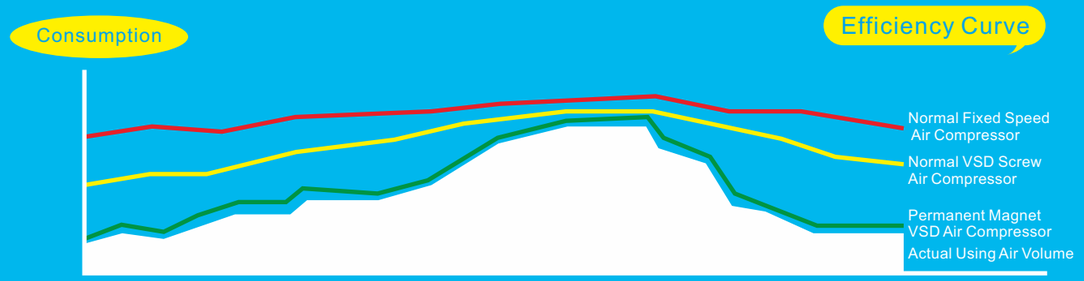
  1year electric saving:
  6000h x 43kw x 60% (loading rate) x7% = 10836kw.h
  Suspect electric charge USD0.2/kw.h, 1year save money:**10836kw.h x USD0.2/kw.h = USD2167.00**

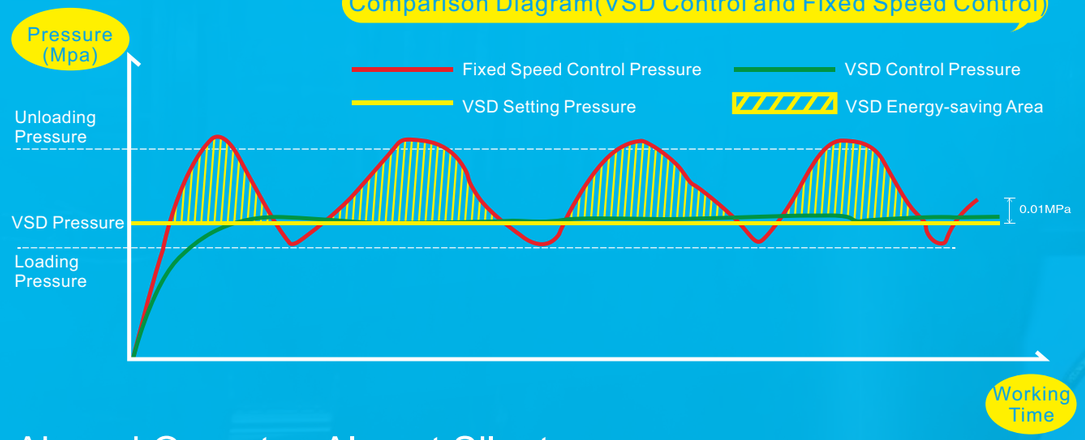
Compared with the normal frequency compressor, PM compressor can save electric charge more than 74,000 degree/year.
10836kw.h + 52800kw.h + 10836kw.h = 74472kw.h/year

Why Choose Olymtech VSD PM Compressor?



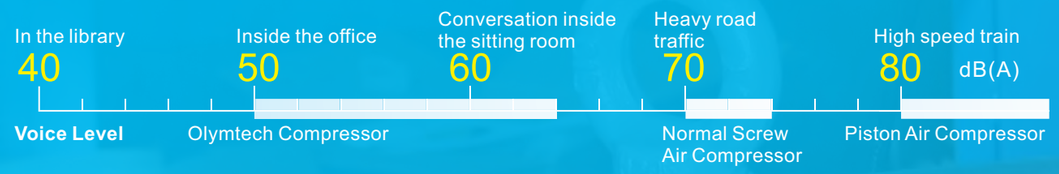
Compared with the normal fixed speed and normal VSD screw air compressor, in the small loading rate, the PM screw compressor has lower energy consumption and more energy saving.

Most factories will choose a compressor with 20% higher air volume as they consider pressure loss. There is a big fluctuation in the air consumption of any time(different time, every day, every year). It may result most of the loading rate is about 50% to 70%. The User spends unnecessary electricity charge, which means they can not reduce the product cost. Now the material cost is no longer the key product cost, the electricity charge had been the key product cost. So saving electricity means saving products cost, which make your products more competitive.



Air-end Operates Almost Silent

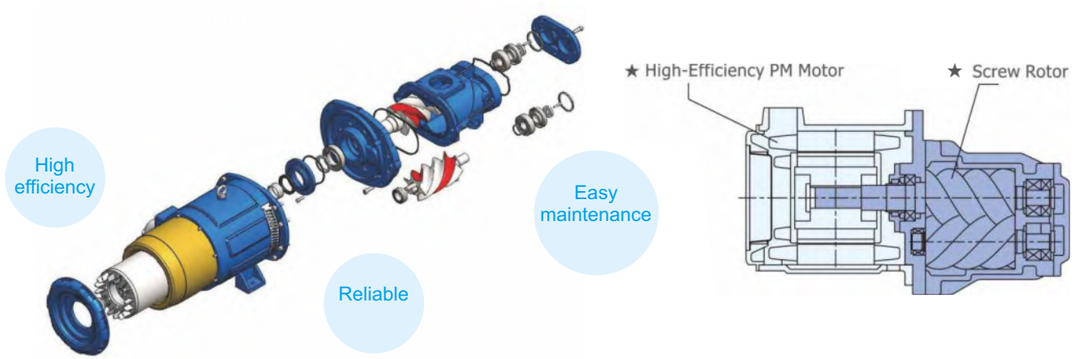
- **Using advanced structural design, optimization of fluid and sound-absorbing materials and other methods, realise the ultra low operating sound.**
- **The fan can be controlled by the inverter, this can further reduce the noise(optional).**
- **Consider the sound pressure, sound quality, the volume of noise and other countermeasures, makes the noise drop to a minimum Level, ensures it is suitable for any factory.**



40%

Energy-saving

C series - Permanent Magnet Synchronous VSD Screw Air Compressor



Real Energy-Saving Products

Olymtech Permanent Magnet Motor Variable Speed Screw Air Compressor

CPM SERIES

Technical Parameter

CPM Series Permanent Magnet VSD Screw Air Compressor

Model	Max Working Pressure		F.A.D		Motor Power		Connection	Net Weight	Dimension (L*W*H)
	bar	psig	m³/min	CFM	hp	kw		kgs	mm
C7.5PM-8	8	116	1.15	40	10	7.5	G1/2"	260	930X750X1210
C11PM-8	8	116	1.7	60	15	11	G1"	450	1150x800x1135
C15PM-8	8	116	2.6	91	20	15	G1"	480	1150x800x1135
C15PM-10	10	145	2.2	77					
C22PM-8	8	116	3.6	127	30	22	G1"	500	1150x800x1135
C22PM-10	10	145	3.2	113					
C30PM-8	8	116	5	176	40	30	G1-1/2"	650	1350x930x1255
C30PM-10	10	145	4.4	155					
C37PM-8	8	116	6.5	229	50	37	G1-1/2"	680	1350x930x1255
C37PM-10	10	145	5.6	197					
C45PM-8	8	116	8	282	60	45	G1-1/2"	930	1500x1125x1480
C45PM-10	10	145	7	247					
C55PM-8	8	116	10	353	75	55	G1-1/2"	950	1500x1125x1480
C55PM-10	10	145	8.6	303					
C75PM-8	8	116	13.12	463	100	75	G2"	1150	1700x1200x1600
C75PM-10	10	145	11.6	409					
C90PM-8	8	116	15.2	537	120	90	G2"	1560	1900x1300x1900
C90PM-10	10	145	13.3	470					
C110PM-8	8	116	20	706	145	110	DN65	1700	2250x1500x1900
C110PM-10	10	145	16.9	597					
C132PM-8	8	116	22.5	795	175	132	DN65	1760	2250x1500x1900
C132PM-10	10	145	20.1	710					

- According to the standard of GB19153-2009
- Compressor Stage: One Stage Compression
- Standard Power Supply: 380V/50Hz/3Ph
- Exhaust Temperature: Ambient Temperature + 15 ℃
- Please contact us for any specification that is not within the above mentioned standards.