



**FUSION**<sup>®</sup>  
SCREW AIR COMPRESSOR

**VARIABLE SPEED AIR COMPRESSOR**

**ADVANCED TECHNOLOGY FROM GERMANY**





# VARIABLE SPEED SCREW AIR COMPRESSOR

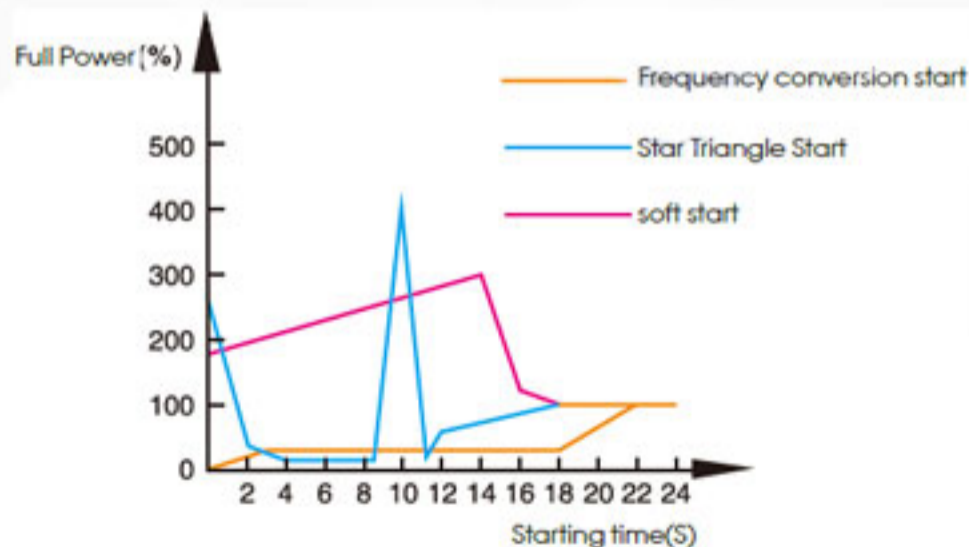
## Variable Speed Screw Air Compressor

**FUSION** variable speed screw compressor is developed based on the advanced frequency conversion technology from Germany. It has many features such as stable air source, easy control system, optimized protection function, long running life, and energy saving. Above all these features, the most remarkable feature will be energy saving.

**FUSION** variable speed screw compressor represents the new trend of energy efficiency.

## The displacement pressure can be changed easily and provide stable constant pressure air

- The displacement pressure can be set between 3 - 14 bar without gearbox or belt.
- A pre-set stable constant pressure will be output in a range of  $\pm 0.1$  bar
- When the system has a **high** demand of air, the machine will run faster and keep providing stable pressure air.
- When the system has a **low** demand of air, the machine will run slower and keep providing stable pressure air.

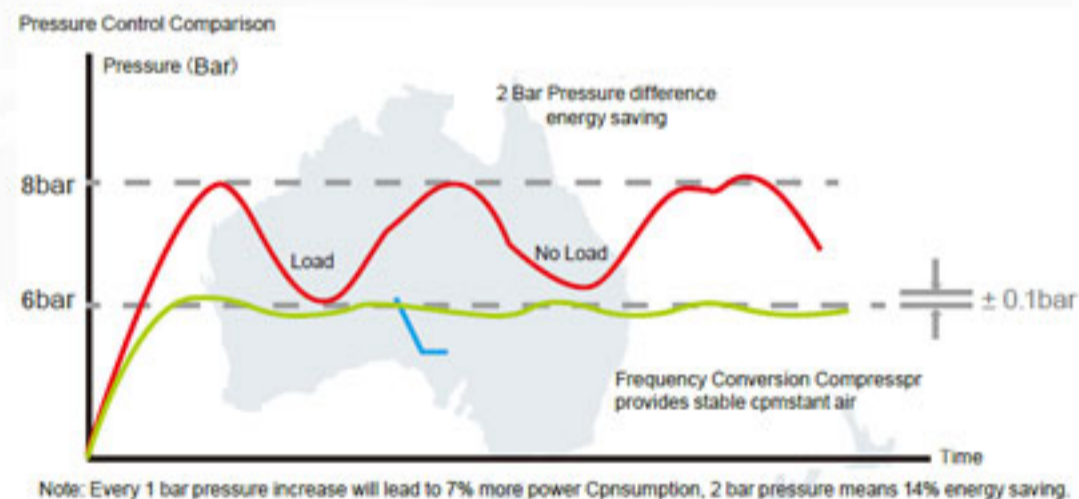


## More Reliable

- The frequency conversion machine starts smoothly and can avoid the peak current which might burden your whole power supply.
- Avoiding the negative factors from constant high speed running.
- Lowering the possibility of system leak by setting the surpass pressure under 2 bar.

## The advanced frequency conversion technology gives you an incredible energy savings

- With the variable speed system, the output pressure of the compressor can perfectly match with the demand of the system, which avoid no-load energy consumption.
- Under the inconstant air demand, the frequency conversion system can start without peak current, which avoids the overload and allows the compressor to stop frequently.
- With 2 bar output pressure control, the system can save 14% on energy consumption.



Here is the energy savings for different power machines (Suppose 8,000 hours a year, 70% loading time)

| Power                  | 7.5KW | 11KW | 15KW | 22KW | 37KW | 55KW  | 75KW  | 90KW  | 110KW | 250KW |
|------------------------|-------|------|------|------|------|-------|-------|-------|-------|-------|
| Save Cost (USD / Year) | 1600  | 2360 | 3234 | 4719 | 7970 | 11830 | 16137 | 19305 | 23677 | 53790 |



Energy-saving, high efficiency and high level quality



# EFFICIENCY SCREW AIR COMPRESSOR

## High Efficient Air End

Screw air end is the core of screw air compressor, its performance directly influence the economy and use cost of the whole machine. The compressor is matched with high-precision SKF bearing. Making sure the compressor become less power dissipation and lower energy consumption under the same working conditions, and achieve goals



## High quality air end and bearing

High quality air end and bearing contribute to high stability of compressor under changeable conditions. Make the compressor adapts to the changeable of loading and prolong the service life of rotors:



- Low running speed decreases the abrasion of bearing.
- Low running temperature letdown the load of bearing.
- High precision bearing prolongs the service life.

## Stable microcomputer controlling

1. Standardized design
2. The selected high-tech microcomputer processor can adjust the load of air compressor automatically according to the air capacity in demand.
3. Professional wiring interface is reasonable, brief, clear and easy to maintain.
4. Imported brand electric elements.
5. Strong fault diagnosis and protection functions make The air compressor run more reliable and save more electricity.



## Intake valve

1. According to the system capacity requirement, automatically adjust the volume, ensure smooth operation of equipment and reduce the operating cost, energy saving
2. The vulnerability of smallest maintenance work
3. Large size, small pressure drop, inspiratory capacity



## Intake air filters

By using a large dust holding. Our air filter can filter the micro articles to ensure every component of system works normally.

1. High efficiency imported filter from MANN Filter
2. Dust removal effect of 99.9%
3. Ensure that the compressor host effective dust
4. The extension of the air system of life.



## Motor

With trailer-made low RPM motor. Our compressors are ensured to operate reliably and are 3% to 5% more efficient than competing machine. SKF bearing more durable and reliable, energy saving and long life protection grade and insulation F-class



## Air/Oil separation system

With super high volume tank, the superior quality separator component and advance design thrice air oil separator, our compressor can ensure the high quality of compressed air which contains less than 3 ppm oil.



## High efficient oil filters

Imported from MANN Filter, the efficiency is 20% higher than conventional filter, filtration precision is 9 micron better protection to the air end to get a longer life.



## Quality System



### CE European Union standard certification

Fusion's product design, production meet the standard of European Union.



### ISO9001 Quality Standard

From design, manufacture to delivery, Fusion Compressor abides by the ISO9001 quality system.





# VARIABLE SPEED SCREW COMPRESSOR SPECIFICATION



## VARIABLE SPEED SCREW AIR COMPRESSOR FBN-10AV - FDN-430AV

Models and Specifications

| Model  | FBN-10AV   | FBN-15AV | FBN-20AV | FBN-25AV | FBN-30AV | FDN-10AV | FDN-20AV     | FDN-30AV | FDN-40AV | FDN-50AV | FDN-60AV |      |
|--|------------|----------|----------|----------|----------|----------|--------------|----------|----------|----------|----------|------|
| Free Air Delivery<br>(m <sup>3</sup> /min) / Mpa | 1.2/0.7    | 1.65/0.7 | 2.5/0.7  | 3.2/0.7  | 3.8/0.7  | 1.2/0.7  | 2.5/0.7      | 3.8/0.7  | 5.2/0.7  | 6.7/0.7  | 7.4/0.7  |      |
|  | 1.1/0.8    | 1.5/0.8  | 2.3/0.8  | 3.0/0.8  | 3.5/0.8  | 1.1/0.8  | 2.3/0.8      | 3.5/0.8  | 5.0/0.8  | 6.2/0.8  | 7.0/0.8  |      |
|  | 0.9/1.0    | 1.3/1.0  | 2.1/1.0  | 2.7/1.0  | 3.2/1.0  | -        | 2.1/1.0      | 3.2/1.0  | 4.3/1.0  | 5.7/1.0  | 6.2/1.0  |      |
|  | 0.65/1.3   | 1.0/1.3  | 1.7/1.3  | 2.1/1.3  | 2.3/1.3  | -        | 1.7/1.3      | 2.8/1.2  | 4.0/1.2  | 4.9/1.2  | 5.6/1.2  |      |
| Motor  | KW         | 7.5      | 11       | 15       | 18.5     | 22       | 7.5          | 15       | 22       | 30       | 37       | 45   |
|  | HP         | 10       | 15       | 20       | 25       | 30       | 10           | 20       | 30       | 40       | 50       | 60   |
| Noise dB(A)                                      | 66±2       |          |          |          |          |          | 68±2         |          |          |          |          | 72±2 |
| Air Outlet size                                  | G3/4       |          |          | G1       |          | G1/2     | G3/4         | G1       |          | G1 1/2   |          |      |
| Drive mode                                       | BELT DRIVE |          |          |          |          |          | DIRECT DRIVE |          |          |          |          |      |
| Weight(kg)                                       | 250        | 350      | 400      | 550      | 600      | 210      | 400          | 600      | 650      | 850      | 900      |      |
| Dimension  | L(mm)      | 800      | 950      |          | 1150     |          | 1000         | 1200     | 1380     |          | 1500     |      |
|  | W(mm)      | 720      | 800      |          | 900      |          | 700          | 750      | 850      |          | 1000     |      |
|  | H(mm)      | 950      | 1160     |          | 1380     |          | 830          | 1020     | 1170     |          | 1320     |      |

Models and Specifications

| Model  | FDN-75AV     | FDN-100AV | FDN-120AV | FDN-150AV | FDN-175AV | FDN-200AV | FDN-250AV | FDN-300AV | FDN-350AV | FDN-430AV |     |
|--|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|
| Free Air Delivery<br>(m <sup>3</sup> /min) / Mpa | 10.0/0.7     | 13.4/0.7  | 16.2/0.7  | 21.0/0.7  | 24.5/0.7  | 28.7/0.7  | 32.0/0.7  | 36.0/0.7  | 42.0/0.7  | 51.0/0.7  |     |
|  | 9.2/0.8      | 12.6/0.8  | 15.0/0.8  | 19.8/0.8  | 23.2/0.8  | 27.6/0.8  | 30.4/0.8  | 34.3/0.8  | 40.5/0.8  | 50.2/0.8  |     |
|  | 8.5/1.0      | 11.2/1.0  | 13.8/1.0  | 17.4/1.0  | 20.5/1.0  | 24.6/1.0  | 27.4/1.0  | 30.2/1.0  | 38.2/1.0  | 44.5/1.0  |     |
|  | 7.6/1.2      | 10.0/1.2  | 12.3/1.2  | 14.8/1.2  | 17.4/1.2  | 21.5/1.2  | 24.8/1.2  | 27.7/1.2  | 34.5/1.2  | 39.5/1.2  |     |
| Motor  | KW           | 55        | 75        | 90        | 110       | 132       | 160       | 185       | 220       | 250       | 315 |
|  | HP           | 75        | 100       | 120       | 150       | 175       | 200       | 250       | 300       | 350       | 430 |
| Noise dB(A)                                      | 72±2         |           |           |           | 75±2      |           |           |           |           |           |     |
| Air Outlet size                                  | G2           |           |           | DN65      |           |           | DN80      |           | DN100     | DN110     |     |
| Drive mode                                       | DIRECT DRIVE |           |           |           |           |           |           |           |           |           |     |
| Weight(kg)                                       | 1700         | 1850      | 1950      | 2700      | 2900      | 3200      | 3500      | 4000      | 4500      | 6000      |     |
| Dimension  | L(mm)        | 1900      | 2000      |           | 2700      |           |           | 3200      |           | 3500      |     |
|  | W(mm)        | 1250      | 1250      |           | 1470      |           |           | 2000      |           | 2000      |     |
|  | H(mm)        | 1600      | 1670      |           | 1840      |           |           | 2050      |           | 2050      |     |

Distributor:

