

NAILI Vane Compressors are widely used in transportation, mining, metal smelting, textile, pharmaceutical, petroleum, chemical, cement, food, printing, packaging, shipping, painting, electrical, power transmission, medical and other industries.

OEM Supply



Industry



Textile



Transit

## ROTARY VANE COMPRESSOR SOLUTIONS FOR HIGH EFFICIENCY AIR-POWER

**NAILI**

NAILI Co.,Ltd

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NAILI Co.,Ltd

## ROTARY VANE COMPRESSOR SOLUTIONS RELIABLE, ECONOMIC & ADVANCED VANES



[www.nailicomp.com](http://www.nailicomp.com)



**NAILI**



**Mr. Bern Stoelker**

## **NAILI Co., Ltd.**

Is a high-tech firm which specializes in researching, developing and manufacturing of Rotary Vane Air Compressors.

Our products are used in a variety of industries including: transportation, mining, textiles, pharmaceutical, petroleum, chemical and packaging applications.

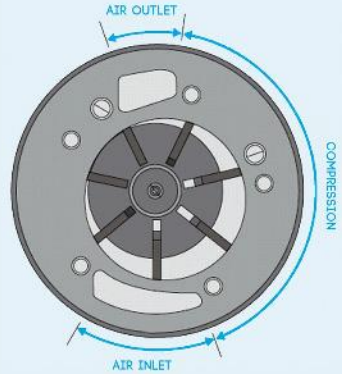


## **R&D Switzerland**

NAILI Co., Ltd. sets up a Research & Development Center in Zurich, which is the main business center in Switzerland and one of Europe's economic, cultural and financial centers. We engaged Dr. Bern Stoelker, expert in Vane air compressors in Europe, as our Technical Director.



# The Principle



The key benefits that rotary vane technology can offer Maximum efficiency of the air compression process, excellent reliability and low running costs;

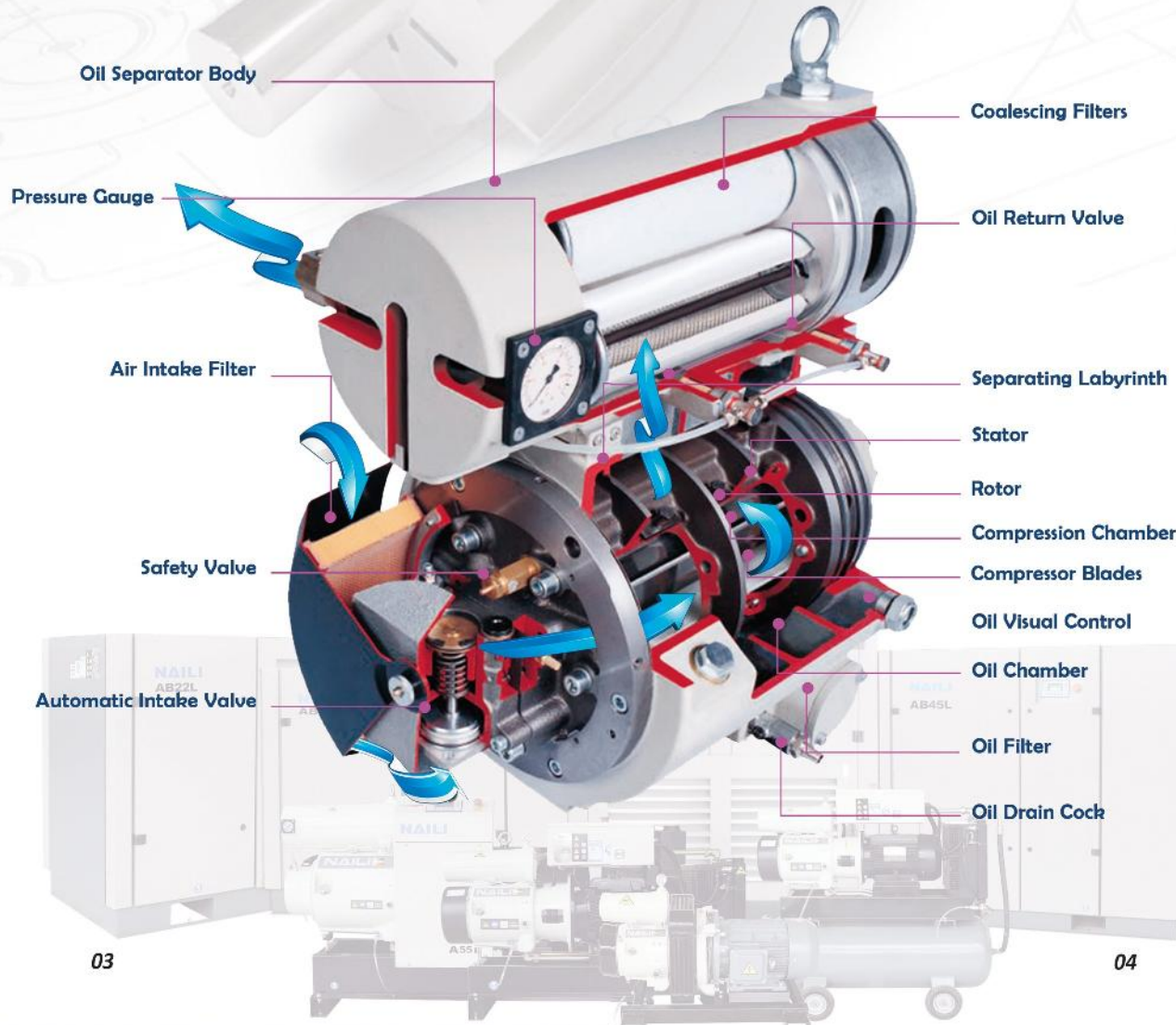
Air is sucked through a filter and then passes through suction valve which regulates air delivery and maintains a constant working pressure. **Thanks to the simple construction:** The rotor rotates eccentrically to the stator and is character set by vertical slots in the rotor in which the blades are placed and are pushed against the stator's wall by centrifugal force. Lubrication and cooling are guaranteed by an efficient injection system which allows perfect hold and a **lower lubricant consumption.** A thin film of oil on the stator's wall avoids direct contact of the metal parts which reduces wear. Compression occurs during rotation with the reduction of volume in the spaces between the rotor blades and the stator. The compressed mixture of air & oil passes through various separating phases leaving purified air **less than 1.5 ppm** (parts per million) of oil to the compressor and is cooled in the radiator; the resulting condensate is eliminated by an electronic condensation drain.



RELIABLE ECONOMIC & ADVANCED VANES



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# Vane's Features

## Automatic Flow Rate Control:

As well as the classic "ON/OFF OPERATION" mode, all of the models, applied in from 4kw to 330kw, are fitted with the special modulating proportional intake valve which allows air supply at a constant pressure and even offers the possibility of working without an air storage tank.

## Air quality:

The exclusive three stage oil separating system guarantees an oil residue in the air of less than 1.5ppm. The coolers guarantee air temperatures no higher than 5 - 10°C above room temperature.

## Direct connection:

A flexible shaft coupling between the motor and compressor removes the need for a transmission belt; it requires less maintenance than gear or ball bearing type assemblies.

## Durable:

Whatever you chose which compressor that NAILI made, working life always shall satisfy you basis on mature technology of the Low rotation speed (only 1480rpm), low abrasion and low noise ensure long service life, The main motor drives the compressor and the cooling fan simultaneously. And most important High efficiency Cooling system to make sure working always in reliability.



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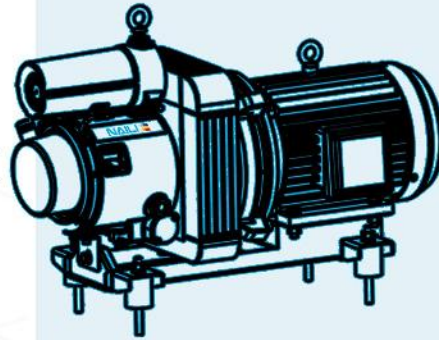
# AZE Product Classification Series

The AZE Series is a compact design rotary vane compressor. Commonly used for compressed air supply in vehicles such as green buses and airport shuttle buses etc.

## AZE1.5-AZE3.0

### TECHNICAL PARAMETERS

Model	AZE1.5	AZE2.2	AZE3.0	
F.A.D (L/min)	7~10 bar	120 - 140	180 - 200	280 - 300
Motor Power (KW)	1.5	2.2	3	
Electric Power Supply	OEM	OEM	OEM	
Rotational Speed (r.p.m)	1390	1410	1410	
Weight (Kg)	16	16	16	
Connection	M22 x 1.5	M22 x 1.5	M22 x 1.5	
Motor Protection Insulation	IP55	IP55	IP55	



### Applications of AZE & AZT:

- Brake system
- Air suspension system
- Door open/close system
- Pantograph power
- Wiper etc.

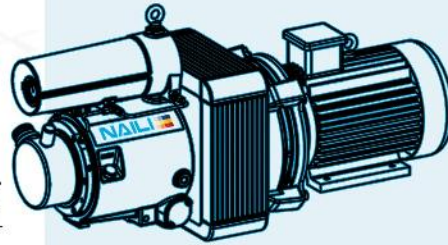
# AZT Product Classification Series

AZT series which is a specially designed for public transportation like Railway Train and Metro. The unit has oil system, suction system, separation system. So that unit can work with higher efficiency and easier to be maintained when it is needs.

## AZT5.5-AZT15

### TECHNICAL PARAMETERS

Model	AZT5.5	AZT7.5	AZT11	AZT15	
F.A.D (L/min)	7~10 bar	745 - 765	1150 - 1195	1650 - 1722	2300 - 2350
Motor Power (KW)	5.5	7.5	11	15	
Electric Power Supply	OEM	OEM	OEM	OEM	
Rotational Speed (r.p.m)	1440	1440	1460	1480	
Weight (Kg)	45	100	130	180	
Connection	Rp1/2	Rp3/4	Rp3/4	Rp3/4	
Motor Protection Insulation	IP55	IP55	IP55	IP55	



▲ NAILI provide compressor for transportation

### Our Customers :



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### Control Panel:

The Control Panel is practical and easy to operate. The control panel features; auto/continual mode, Chinese/English language option and reserve remote control connector.



### Oil Separator:

Our Oil Separator is made of high quality material, it can reduce more oil particles from the compressed air with high-efficiency. The quantity of oil in the compressed air is less than or equal to 1.5ppm.



### Air Filter:

Naili high efficient Air Filter separates more dirt particles; NAILI air filters are twice efficient as compared to traditional air filters.



### Cooling Fan:

Cooling fan is not independent; it is directly fitted to the main motor for effective energy-saving.

# Vane's Benefits

NAILI SERVES THE WORLD

### Hi- EFFICIENCY (1:1)

All compressors from NAILI are a 1:1 ratio between the electric motor speed and that of the aircend. This means greater energy efficiency and higher performances. Compared to other technologies, rotary vane compressors guarantee a superior internal air seal, together with a consistent and long lasting performance.

flexible shaft coupling



### SIMPLICITY

In view of accessible design makes maintenance operations simple and straightforward, NAILI's rotary vane air compressors are quiet and can be located almost anywhere. They are quickly installed and take up a limited of space because of smaller than other compressors it is.

### SAFETY / RELIABILITY

The considerate design for customer's requests that working always in safer, more durable, Thanks to direct coupling, and low rotational speed and less moving parts to ensure rotary vane air compressors of NAILI remained for more reliable over time.

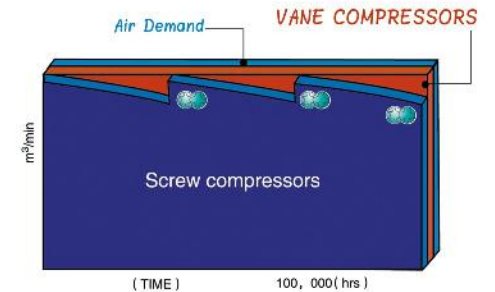
### QUALITY OF THE AIR

All NAILI's Vane compressors have a generously filtering system, which guarantees quality compressed air suitable for any use. Because of multi-stage oil separation system produces an exceptionally low lubricant carry-over at one time.

### LOW OPERATING COSTS / LOW MAINTENANCE

NAILI rotary vane compressors are designed to reach 100,000 hours life without the need to replace any blades or other metal parts.

The long operating life of a NAILI compressor is assured by high quality machining which is the essence of rotary vane air compressors.



- Simple Design
- High Reliability
- Energy-efficient
- Long Life
- Low Maintenance
- Rotary Vane Technology is extremely quiet

# A Series

Product Classification



The A series rotary vane compressor has a simplified appearance without changing the air end which decreases the cost of whole machine without compromising performance. The machine structure is not enclosed which makes it easier to repair and maintain. Our air compressor's control panels are very easy to operate and are available in different languages.



Compressed Air System



## A4-A11

### TECHNICAL PARAMETERS

Model	A4	A5.5	A7.5	A11	
F.A.D (m <sup>3</sup> /min)	8 bar 10 bar 13 bar	0.68 0.53 0.48	0.90 0.77 0.56	1.39 1.15 0.95	1.96 1.71 1.33
Motor Power (KW)	4.0	5.5	7.5	11	
Rotational Speed (r.p.m)	1435	1440	1440	1460	
Motor Protection Insulation	IP55	IP55	IP55	IP55	
Oil System Capacity (L)	2.5	2.5	3.5	3.5	
Oil Carryover (ppm)	≤ 3	≤ 3	≤ 3	≤ 3	
Sound Level Db (A)	71	71	75	75	

### New Technology:

When two sets or more air compressors combined, it use one set of post procession equipment, it can chose specification of post procession equipment according to realistic gas consumption. If one air compressor is only as backup machine and does not use at the same time, it should chose post procession equipment according to maximum using flow.



## A15-A22

### TECHNICAL PARAMETERS

Model	A15	A18.5	A22	
F.A.D (m <sup>3</sup> /min)	8 bar 10 bar 13 bar	2.71 2.21 1.85	3.29 2.65 2.25	3.76 3.21 2.56
Motor Power (KW)	15	18.5	22	
Rotational Speed (r.p.m)	1460	1470	1470	
Motor Protection Insulation	IP55	IP55	IP55	
Oil System Capacity (L)	10	10	10	
Oil Carryover (ppm)	≤ 3	≤ 3	≤ 3	
Sound Level Db (A)	79	79	79	



## A30-A55

### TECHNICAL PARAMETERS

Model	A30	A37	A45	A55	
F.A.D (m <sup>3</sup> /min)	8 bar 10 bar 13 bar	5.60 4.65 3.66	6.80 5.66 4.70	8.25 7.00 5.83	- 8.90 7.00
Motor Power (KW)	30	37	45	55	
Rotational Speed (r.p.m)	1470	1475	1475	1480	
Motor Protection Insulation	IP55	IP55	IP55	IP55	
Oil System Capacity (L)	19	19	19	19	
Oil Carryover (ppm)	≤ 3	≤ 3	≤ 3	≤ 3	
Sound Level Db (A)	79	79	81	81	



▲ NAILI provide compressor for Auto- mobile Industry



▲ NAILI provide compressor for Fabrication Industry



▲ NAILI provide compressor for Shipbuilding Industry

# Frequency Controller



NAILI Cooperated with INVT for better solution to your energy saving!



# Product Classification AB Series



The AB series super silent rotary vane compressors operate between 67dB(A) – 76dB(A). The AB series features an intelligent control system, state monitoring and protection system, remote control function, easy operation and supports a user friendly interface. This model is most suitable for applications which demand noise to be kept to a minimum and it is one relatively high-quality air compressor.



## AB4-AB11

### TECHNICAL PARAMETERS

Model	AB4	AB5.5	AB7.5	AB11
F.A.D (m <sup>3</sup> /min)	0.68	0.90	1.39	1.96
	0.53	0.77	1.15	1.71
	0.48	0.56	0.95	1.33
Motor Power (KW)	4.0	5.5	7.5	11
Rotational Speed (r.p.m)	1435	1440	1440	1460
Motor Protection Insulation	IP55	IP55	IP55	IP55
Oil System Capacity (L)	2.5	2.5	3.5	3.5
Oil Carryover (ppm)	≤ 3	≤ 3	≤ 3	≤ 3
Sound Level Db (A)	67	67	69	69



## AB15-AB22

### TECHNICAL PARAMETERS

Model	AB15	AB18.5	AB22
F.A.D (m <sup>3</sup> /min)	2.71	3.29	3.76
	2.21	2.65	3.21
	1.85	2.25	2.56
Motor Power (KW)	15	18.5	22
Rotational Speed (r.p.m)	1460	1470	1470
Motor Protection Insulation	IP55	IP55	IP55
Oil System Capacity (L)	10	10	10
Oil Carryover (ppm)	≤ 3	≤ 3	≤ 3
Sound Level Db (A)	72	72	72



## AB30-AB55

### TECHNICAL PARAMETERS

Model	AB30	AB37	AB45	AB55
F.A.D (m <sup>3</sup> /min)	5.60	6.80	8.25	-
	4.65	5.66	7.00	8.90
	3.66	4.70	5.83	7.00
Motor Power (KW)	30	37	45	55
Rotational Speed (r.p.m)	1470	1475	1475	1480
Motor Protection Insulation	IP55	IP55	IP55	IP55
Oil System Capacity (L)	19	19	19	19
Oil Carryover (ppm)	≤ 3	≤ 3	≤ 3	≤ 3
Sound Level Db (A)	Axial Fan	76	76	76
	Centrifugal	68	68	68



▲ NAILI provide compressor for Textile Industry



▲ NAILI provide compressor for Food and Beverage Industry



▲ NAILI provide compressor for Electric and Electronics Industry



▲ NAILI provide compressor for Electronics Industry



▲ NAILI provide compressor for Textile Industry



▲ "MD75" the most popular vane type compressor

# MD Product Classification Series



MD series is a double engine design vane type compressor series, used for more compressed air supply in industries. MD series can run in low-load state when less air volume demand. According to less air volume demand compressor can adjust working state at any moment in order to better suit small and medium-sized industries.

## MD30-MD110

### TECHNICAL PARAMETERS

	Model	MD30	MD37	MD44	MD75	MD110
	8 bar	5.80	7.00	8.00	13.60	20
F.A.D (m3/min)	10 bar	4.96	5.58	6.96	11.32	17.80
	13 bar	4.00	4.92	5.60	9.60	14.40
Motor Power (KW)		15 x 2	18.5 x 2	22 x 2	37 x 2	55 x 2
Rotational Speed (r.p.m)		1460	1470	1470	1475	1480
Drive Method		Direct	Direct	Direct	Direct	Direct
Oil Carryover (ppm)		≤ 1.5	≤ 1.5	≤ 1.5	≤ 1.5	≤ 1.5
Ambient Temperature (C)		0-45	0-45	0-45	0-45	0-45
Air Outlet Size (RP)		DN65	DN65	DN65	DN65	DN65

## MD135-MD330

### TECHNICAL PARAMETERS

	Model	MD135	MD180	MD220	MD275	MD330
	8 bar	24.83	33.11	39.58	49.48	59.30
F.A.D (m3/min)	10 bar	20.98	27.80	35.53	44.43	53.31
	13 bar	17.63	23.43	28.72	35.89	43.18
Motor Power (KW)		45 x 3	45 x 4	55 x 4	55 x 5	55 x 6
Rotational Speed (r.p.m)		1475	1475	1480	1480	1480
Drive Method		Direct	Direct	Direct	Direct	Direct
Oil Carryover (ppm)		≤ 1.5	≤ 1.5	≤ 1.5	≤ 1.5	≤ 1.5
Ambient Temperature (C)		0-45	0-45	0-45	0-45	0-45
Air Outlet Size (RP)		DN65	DN65	DN65	DN65	DN65

# AH Product Classification Series



NAILI Hydraulic Compressor converts hydraulic power into compressed air. Compressor circuit is very compact. Compact design makes it excellent and easy to carry load.

## AH4L-AH18L

### TECHNICAL PARAMETERS

	Model	AH4L	AH7L	AH15L	AH18L
F.A.D (m3/min)	Bar	8.00	8.00	8.00	8.00
	Min.	0.70	1.38	2.70	3.28
	Max.	1.44	2.85	5.55	6.72
Discharge Capacity (ml/r)		42	42	56.1	56.1
Rotational Speed (rpm)	Max.	3000	3000	3000	3000
	Min.	1440	1440	1440	1440
Oil Pressure (mpa)	Max.	20	20	35	35
	Min.	18	18	25	30

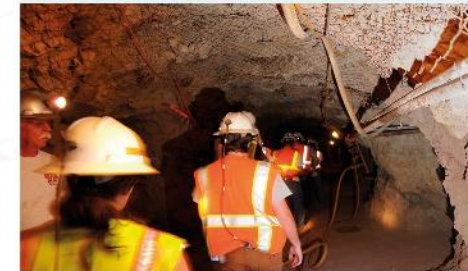
## AH4H-AH22L

### TECHNICAL PARAMETERS

	Model	AH4H	AH11H	AH15H	AH22L
	Bar	10.00	10.00	10.00	8.00
F.A.D (m3/min)	Min.	0.53	1.70	2.20	3.75
	Max.	1.08	3.51	4.53	7.71
Discharge Capacity (ml/r)		42	42	56.1	56.1
Rotational Speed (rpm)	Max.	3000	3000	3000	3000
	Min.	1440	1440	1440	1440
Oil Pressure (mpa)	Max.	20	20	35	35
	Min.	18	20	25	33



◀ Crane arms



▲ NAILI provide compressor for Mining Industry



### Hydraulic Compressor:

NAILI Hydraulic compressor provides compressed air anytime. It can easily take place of the old hydraulic air compressor models. Compressed air can be supplied for pneumatic tools and accessories for drilling and other

# Rotary Screw Compressors vs Rotary Vane



## Rotary Vane vs Rotary Screw Compressors What's the Difference?

Although rotary vane and rotary screw compressors were developed at similar times and are designed to perform the same function, the two technologies differ greatly. Continue reading to learn how the two types of compressors compare in terms of efficiency, longevity & maintenance.



**Don't get screwed  
Get a vane.**

*There's no question about it – NAILI's innovative rotary vane compressors can't be matched.*

*If you're looking for supreme efficiency and unrivalled performance, NAILI's BLADE compressor is the answer and the ideal product for small to medium commercial applications.*

*Advanced design, enhanced durability and unparalleled efficiency, combined with cutting-edge rotary vane technology, make the BLADE a pioneer in its field. We can assure you that the BLADE is your perfect solution.*



### What is a Rotary Vane Compressor?

A rotary vane compressor is a volumetric rotary compressor, consisting of a rotor (with longitudinal slots in which the vane slide) rotating within a stator (or cylinder). The rotor is offset in the stator so that when it turns on its axis, the vanes are pushed against the stator by centrifugal force.



There is a volume between the adjacent vanes, during rotation, this volume passes from a maximum value, corresponding with the maximum exit of the vanes, to a minimum value, at which point the stator becomes tangential with the rotor and vice versa. The volume increases during air intake and progressively decreases during the compression stage, until the delivery ports are covered by the vanes.



### What is a Rotary Screw Compressor?

The screw compressor is a volumetric rotary compressor composed of two parallel rotors with external helical profiles (screws) which enables the two rotors to engage, one into the other, the two rotors are fitted in a stator made from two cylinders which intersect longitudinally and in which the rotors turn with a critical minimum clearance.

# AIR End Machine Head

NAILI manufactures an extensive range of Rotary Vane Air Ends. Due to the integrated, compact design they are ideal to be utilized in many OEM applications and are available as individual items.

Air Ends up to 1.13m<sup>3</sup>/min (40cfm) come fully integrated with the only requirement being the drive media. Example: an Electric Motor, Hydraulic Motor potentially using a variety of different Engines.

A complete pressure range is available from 8 bar up to 13bar

Air ends available cover 1.1kw (1.5hp) up to 75kw (100hp)



This is obtained with flexible coupling between motor and compressor without any need for belts, it's without gears or roller bearings needing maintenance.



### Auto Air Intake Regulator:

The auto air intake regulator will be able to regulate the entrance. It open-close for controlling the intake air, make compressor to regulate itself in different working conditions to make sure constantly supply air and it goes without air tank.

