

Centrifugal Compressors

Installed motor power 300 - 9000 kW / 400-12000 hp



P-DNR201907-01 Specifications are subject to change without prior notice.
Never use compressed air as breathing air without prior purification in accordance with local legislation and standards.



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DENAIR GROUP

is an air compressor company based in Germany with a plant in Shanghai, China. Founded in 1998, with over 500 employees. Our goal is to provide exceptional customer service coupled with quality products and energy saving solutions.

DENAIR's primary businesses focus in following key areas:

- Oil-injected rotary screw compressors
- Heat pump
- Portable screw air compressors
- Oil free air compressors
- High pressure air compressors
- Air treatment equipment
- Vacuum pump
- **Centrifugal compressors**

At DENAIR, we have gained the trust of our customers by manufacturing the superior quality compressed air products for all industries. All of our products are designed for reliable performance.



DENAIR continuously innovates product development and management to meet customer's demand. The powerful enterprise culture and continuous innovation make DENAIR improved rapidly to reach the business principle "Energy Saving First, Mutual Value Shared".

DENAIR CULTURE

VISION:

To be a world renowned high-end energy saving machinery brand.

MISSION:

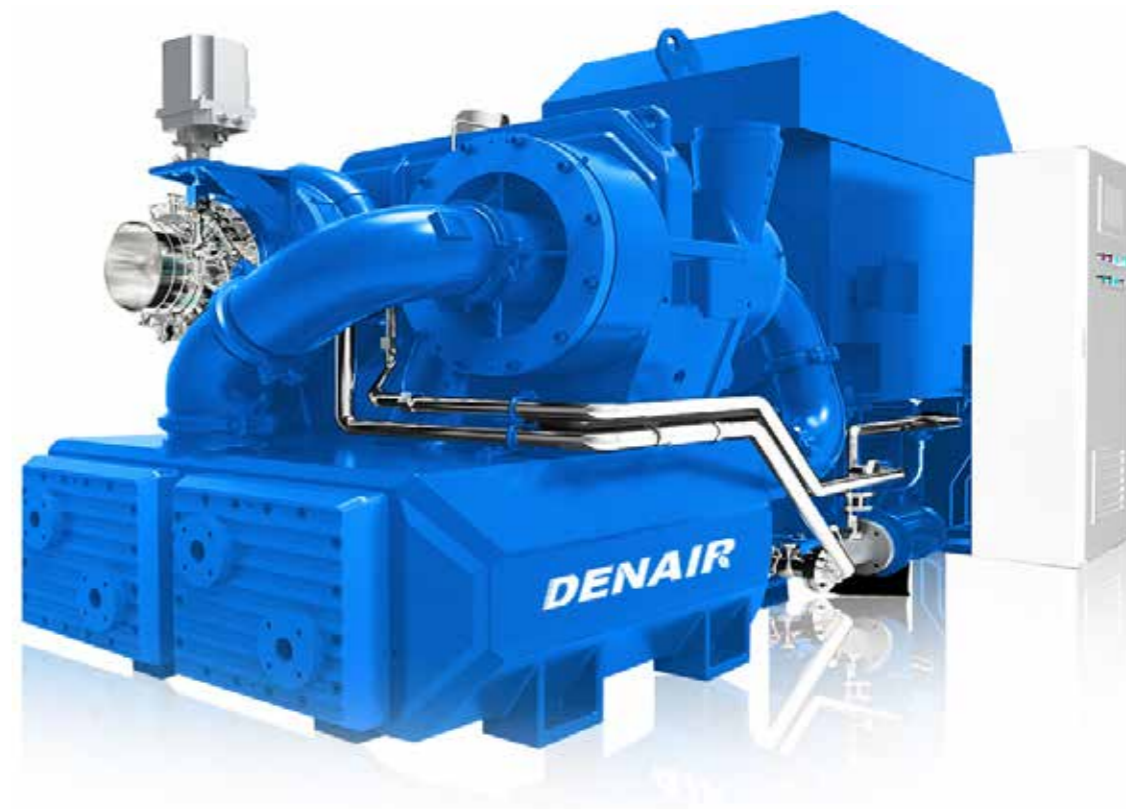
- ▶ To continuously enhance the values of employees.
- ▶ To satisfy the customers' demands.
- ▶ To provide efficient and intelligent solutions and products.

CORE VALUES:

- ▶ To pursue a positive development.
- ▶ To be sensible and trustworthy.
- ▶ Keep learning and innovating.
- ▶ To be submissive and act immediately.
- ▶ To be grateful and introspective.

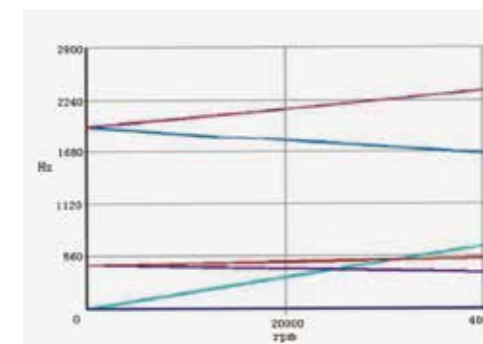
Centrifugal Compressor

Core Technology



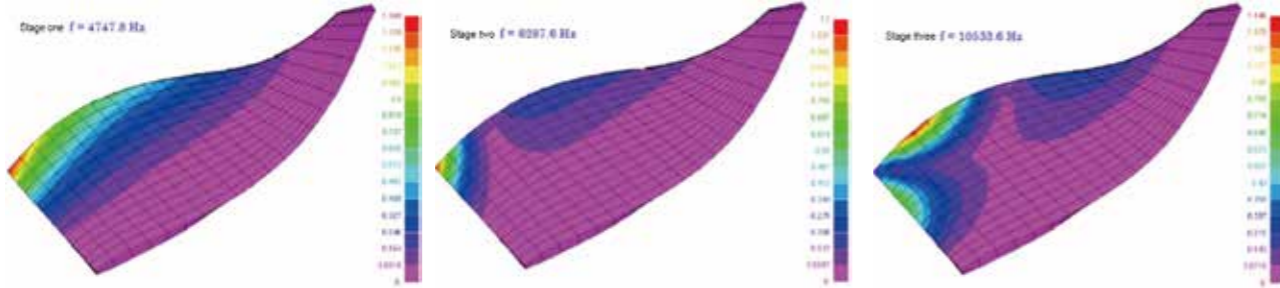
01 Rotor dynamic analysis

Rotor system critical speed analyze is the theory of safety operation of compress.



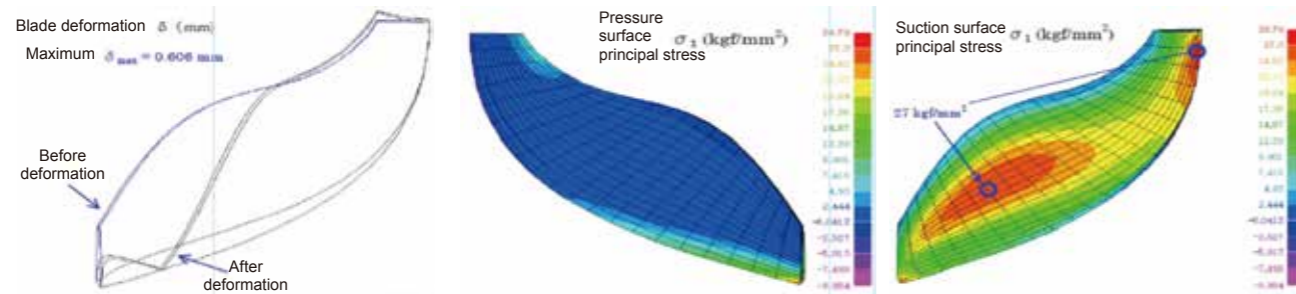
02 Rotor modal analysis

Analyze various vibration modes of impeller under high speed rotating state, and adjust relevant design parameters to avoid resonance, ensure stable operation and work of the compressor.



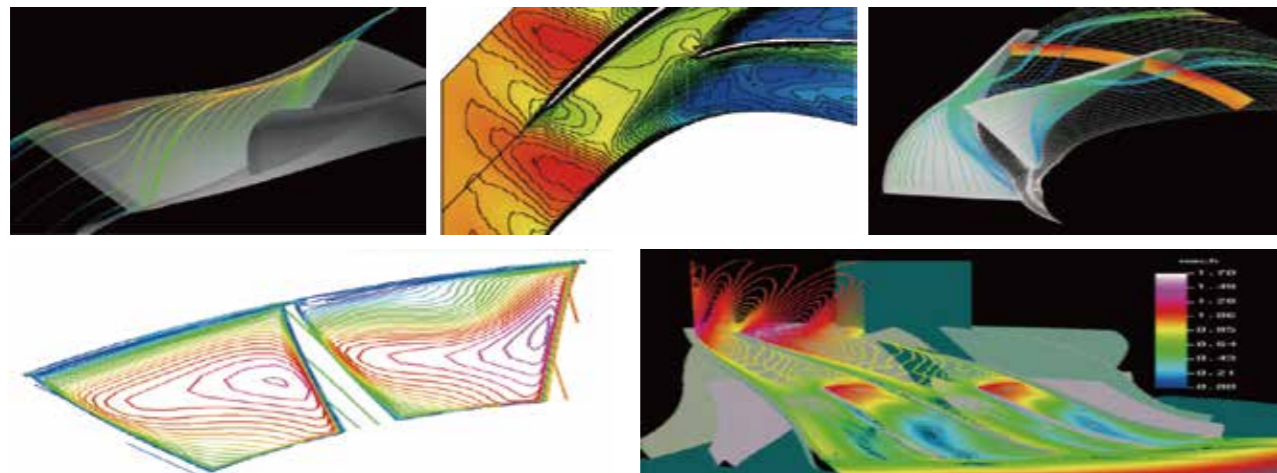
03 Stress and strain analysis of impeller

Use the professional designing tool, the impeller strength analysis, and the selection of different materials and structures, the impeller is safe loaded which ensure the long life and stable operation of itself.



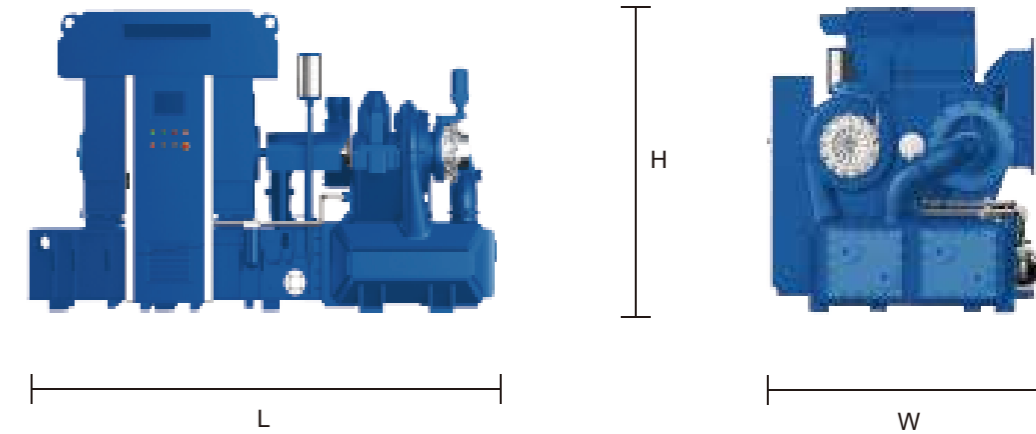
04 The aerodynamic design

Through CFD calculation and analysis of the basic model, the shape and collocation of blade, diffuser and scroll are optimized, and the aerodynamic design is constantly improved to achieve higher efficiency and wider turndown range.



Centrifugal Compressor Parameter Selection

Standard range model of centrifugal fit various pressure and flow requirement of customers.



Technical Parameters

Model	Pressure		Flow Rate		Motor Power		Dimensions			Weight
	bar	psig	m³/min	cfm	kW	hp	L(mm)	W(mm)	H(mm)	kg
DHC50	0.6-9	9-131	50-70	1766-2472	300-450	400-600	3280	1850	2200	6300
DHC100	0.6-9	9-131	70-130	2472-4590	400-640	530-900	3800	2000	2250	8160
DHC150	0.6-12	9-174	120-160	4237-5650	630-800	840-1200	4200	2150	2350	11500
DHC200	0.6-16	9-232	160-230	5650-8121	760-1120	1010-1750	4200	2150	2350	12000
DHC300	0.6-16	9-232	230-330	8121-11652	980-1600	1320-2150	4600	2200	2500	17200
DHC400	0.6-16	9-232	330-440	11652-15536	1380-2250	1840-3000	5300	2300	2970	21500
DHC500	0.6-25	9-363	350-580	12359-20480	1800-2850	2400-3800	6000	4500	3500	40000
DHC700	0.6-25	9-363	530-900	18714-31779	2700-4500	3500-6000	8500	4200	4200	45000
DHC900	0.6-25	9-363	850-1500	30014-52965	4200-9000	5800-12000	12000	5000	5300	65000

Air End Structure

Air Seal

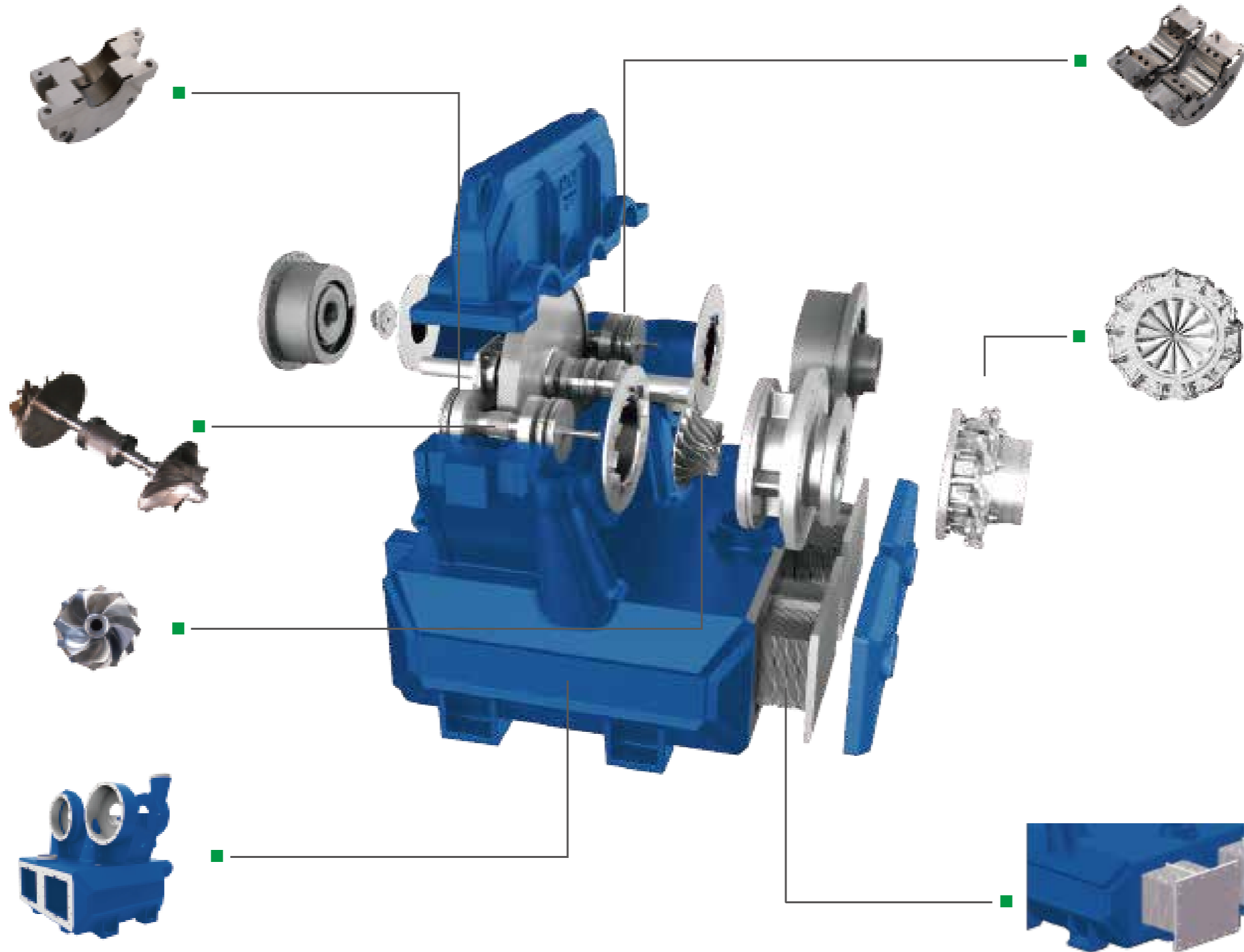
Labyrinth type of gas seal and oil seal, which has no friction between the seal and the shaft, and can keep low leakage for a long time.

Impeller

Independently developed high-efficiency impeller, 17-4PH high-strength stainless steel integral milling. Every impeller has passed the overspeed test of 115% according to the API standard.

Gear Box

The gearbox and cooler shell are integral castings, which are more silent and stonger than seperated design.



Bearing

Tilting pad bearing can meet the vibration changing of compressor with the ability of automatic alignment, the babbitt on the tile surface protects the shaft out of damage.

Inlet Guide Vane IGV

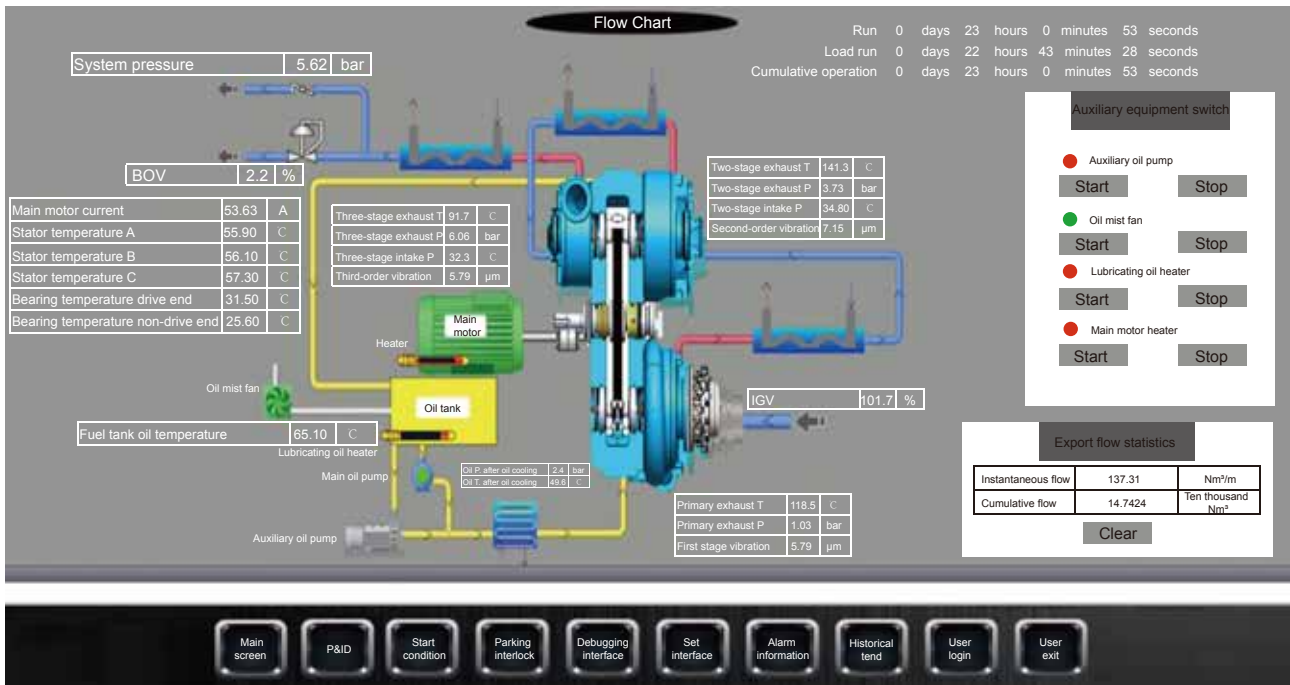
Electrical / pneumatic actuator is applied on the inlet guide vane, turn down range is 70% ~ 100%. The pressure loss of IGV is much lower than other values.

Gas Cooler

Water in pipe, gas in shell, varies material of tube and fin fit all kinds of site condition. Guaranteed service life and easy maintenance.

Advanced Control System

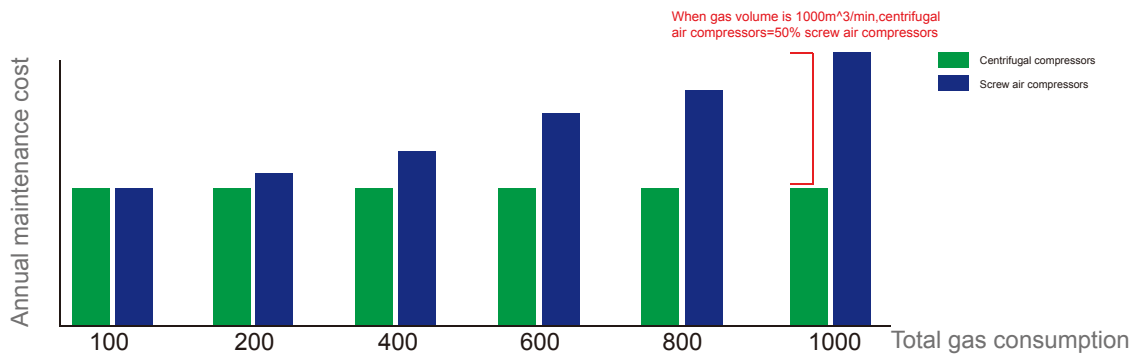
- Standard 12" touch screen, all parameters of the compressor can be viewed on it, easy to operate;
- Standard Siemens PLC, automatic dual mode + constant voltage control mode can be switched locally and remotely to ensure safe and stable operation;
- Automatic remind when the faults occur or maintainance is needed;
- Historical data can be viewed locally and remotely.



Energy Saving And Emission Reduction



Generally, the larger volume, the higher efficiency. One centrifuge can save about 20% energy when replacing several small screws.



Use centrifuge to replace many screw machines, save maintenance cost & time and site area.