



# Next-Generation VPSA Plant

Reduce cost and increase efficiency  
to solve the industry oxygen supply challenge

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**盈德工程**  
YINGDE ENGINEERING





# Industry Challenges

In energy-intensive industries such as metallurgy, non-ferrous metals, new materials, and environmental protection, traditional oxygen supply methods suffer from high energy consumption and low efficiency. While VPSA (Vacuum Pressure Swing Adsorption) technology has emerged as a new solution for enterprises due to its low energy consumption and high efficiency, it still faces challenges like limited scalability, high noise levels, frequent maintenance, and issues such as high trial-and-error costs and lack of data transparency. To address these common challenges in traditional VPSA plants, Yingde Engineering has developed innovative solutions to break through these barriers.

## Next-Generation VPSA Solution

Leveraging its deep technical expertise and industry insights, Yingde Engineering has upgraded its VPSA plant, achieving breakthroughs in three key dimensions: quality, operational efficiency, and energy performance.



### 01 Large scale :

The innovative self-developed multi-tower adsorption process meets the large-scale industrial oxygen demand.



### 02 Energy-saving:

The centrifugal drive multi-tower VPSA reduces energy consumption by 20% compared to traditional equipment.



### 03 More environmentally friendly:

Centrifugal drive to reduce dB.C noise level by more than 30%. Noise control costs are reduced.



### 04 Low maintenance:

Self-developed high-frequency hydraulic control valve, the service life of key equipment is more than doubled, the maintenance amount is reduced by more than 50%, the maintenance cost is reduced.



### 05 Intelligent:

Life cycle safety management and energy efficiency optimization.

## Choose Yingde Engineering to Reduce Costs and Increase Efficiency

Yingde Engineering's VPSA plants, renowned for its cost-effectiveness, operational flexibility, and environmental sustainability, have been successfully deployed across multiple industrial sectors, delivering efficient solutions to meet the large-scale industrial oxygen demand to partners. The company remains committed to advancing energy-saving technologies and developing intelligent control systems, dedicated to creating premium gas supply solutions for industrial enterprises. These innovations enable significant reductions in overall energy consumption while substantially enhancing gas delivery efficiency.

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## Representative Cases



### China Jushi

6,000 Nm<sup>3</sup>/h

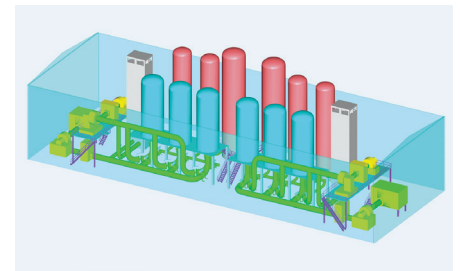
VPSA oxygen plant with 93% oxygen purity



### Qingshan Iron and Steel

1,500 Nm<sup>3</sup>/h

VPSA oxygen plant



15,000 Nm<sup>3</sup>/h

Next-generation VPSA oxygen production system



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