



HENGYE

Celebrating 10 Years

Molecular Sieve Adsorbents Air Separation

www.hengyeinc.com

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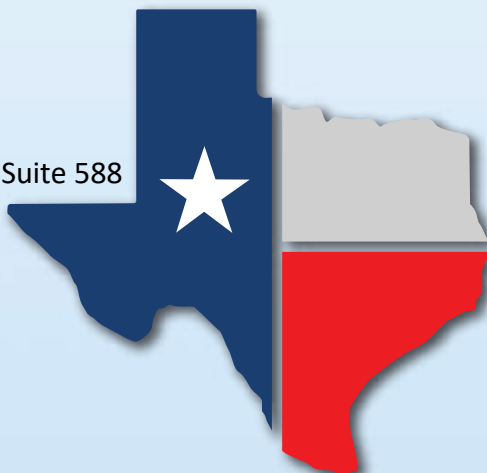
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Hengye® Inc.

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Air Separation

Adsorbents are used in a range of air separation, purification, and compression applications. Air must go through separation processes to obtain valuable gases at a purity level that must be met whether its oxygen or nitrogen. Argon and other gases in air must be treated to achieve requirement of impurity levels.

Applications

- Cryogenic Air Pre-purification
- Nitrogen Production
- Oxygen Generation



Cryogenic Air Pre-purification

Air separation plants use cryogenic air separation technology to bring gas streams to extremely low temperatures, which allows plants to separate various gases by the condensation point. Gas that is cryogenically separated needs to have extremely low levels of water, carbon monoxide, and carbon dioxide in the stream to prevent freezing and blockage.

Prevent liquid drop out, sublimation and freezing resulting in blockage and damage to the system.



Cryogenic Air Pre-purification

(Continued)

Products

HYD10A 13X (4X8, 8X12) Molecular Sieve

- Used to remove CO₂, CO and stream H₂O from feed stream
- Allows the system to reach Cryogenic temperatures without freezing, sublimation or liquid drop out
- High capacity, very fast mass transfer rates allow extreme efficiency through compressed MTZ

HYD10B 13X Molecular Sieve, Beads and Pellets

- Used to remove chlorides such as HCl and other contaminants
- Does not produce green oil or support the formation of organic chlorides
- Prevents harmful chlorides from corroding and damaging equipment
- Offers a high capacity and rate for HCl scavenging

HYD10D 13X Molecular Sieve, Beads

- Used to deeply dehydrate air feed streams
- Capable of dehydrating air streams to cryogenic separation specification
- Allows air to be used in compressors and pneumatic equipment
- Offers optimized adsorption kinetics

Nitrogen Production

Nitrogen is a valuable gas that is used in many applications from filling rubber tires to powering lasers. Nitrogen can be produced using atmospheric air and can be either adsorbed or rejected during Pressure Swing Adsorption (PSA) processes to create a high purity stream.

Hengye's products are capable of generating high purity streams of nitrogen using a wide variety of different separation techniques. Whether you're creating a nitrogen stream from atmospheric air or purifying an existing stream for high purity, we have the product for you.

Products

Carbon Molecular Sieve (200, 220, 240, 260)

Carbon Molecular Sieve is a specialized Molecular Sieve. CMS 260 has very high oxygen capacity allowing for Nitrogen generation on a smaller footprint or achieving higher production rates in existing equipment. Please email info@hengyeinc.com for product information.



Oxygen Generation

Oxygen is generated via a pressure swing adsorption process that results in high purity industrial and medical oxygen gas. Oxygen generation involves a special procedure and adsorbents must meet high quality standards to achieve very low levels of nitrogen.

Industrial Oxygen Generation

Large Scale Oxygen Generators (*PSA Units*)

Molecular sieve is used directly in large PSA Units to separate Oxygen from Nitrogen under specific pressures, capturing Nitrogen and releasing Oxygen to a product tank.



Oxygen Generation

Industrial Oxygen Generation

Large Scale Oxygen Generators (*PSA Units*)

(*Continued*)

Products

HYDB100G Sodium X (8×12) Molecular Sieve

HYDB100G Sodium X is a specialized molecular sieve.

Please email info@hengyeinc.com for more information.

HYGB100C Lithium X (10×16) Molecular Sieve

HYGB100C Lithium X is a specialized molecular sieve.

Please email info@hengyeinc.com for more information.

HYGB500B 5A Molecular Sieve for CO₂

HYGB500B 5A is a specialized molecular sieve. Please

email info@hengyeinc.com for more information.

Oxygen Generation

Medical Oxygen Generation

Small Scale Oxygen Generators (*PSA Units*)

Molecular sieve is used directly in small PSA Units to separate Oxygen from Nitrogen under specific pressures, capturing Nitrogen and releasing Oxygen to a product tank.



Oxygen Generation

Medical Oxygen Generation

Small Scale Oxygen Generators (*PSA Units*)

(Continued)

Products

HYGB100D Lithium X (20x35) Molecular Sieve

- Used to remove nitrogen from oxygen streams
- Capable of generating ultra-high purity streams of oxygen
- Allows oxygen to be used as breathing air
- Small beads offer rapid adsorption/desorption rates

HYGB100N Sodium X (20x35) Molecular Sieve

- Used to remove impurities from oxygen streams
- Capable of generating ultra-high purity streams of oxygen
- Allows oxygen to be used as an input gas for other processes
- Small beads offer rapid adsorption/desorption rates

Why Choose Hengye® Inc?

What We Offer You

- Molecular Sieve, Activated Alumina, Silica Gel
- ISO certified manufacturing, world class quality
- Ideal adsorption capacity and product durability

We Can Supply

- Reliable molecular sieve with proven success
- Inventory in Omaha, Nebraska and Houston, Texas
- Super sacks and drums available
- Sales, engineering, and technical service support
- Material analysis and capacity evaluation
- Change out, turnaround services

Support Services

- Remote and on-site support available
- Dehydration unit optimization and operation analysis
- Design engineering and bed loading calculations
- Systems training and activities support
- Material application education and product selection
- Change out services and commissioning
- Analyze remaining working life of products
- Breakthrough testing, product performance analysis

A Global Manufacturer

In 2014, Hengye Inc. was established in Houston, Texas to offer the flexibility and reliability required to meet the growing, dynamic needs in the American adsorbent and catalyst marketplace. Our fully equipped team brings a wide range of services from start to finish, including new unit designs to meet the needs of future constructions and vessel sizing for existing units. Feed streams are unique and Hengye is able to manufacture and select the ideal product to meet specification requirements and maximize the value of product streams. Our sales team, paired with our engineers, will provide the data and technical education to support and bring confidence to those who use Hengye products.



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