

# LEADER IN **ADSORPTION & CONVEYING TECHNOLOGY**

Nitrogen & Oxygen Generators, Conveying  
and Clean Air Solutions

**INERTECH PROJECTS PVT LTD**

# ADSORPTION TECHNOLOGY

## PSA NITROGEN/OXYGEN GAS PLANT

### Standard Features

- ASME Adsorber Vessels
- High Cycle Life Pneumatic / Electric Valves
- Oxygen Analyzer with calibration kit
- Pressure Safety Valve
- Nitrogen Pressure Regulator
- PLC Control System
- Carbon Steel Skid
- Exhaust Silencing Muffler
- Highest Performance Adsorbent Media

### Options / Upgrades

- HMI Display Screen
- Dew Point Analyzer
- Containerized or Trailer Mounted Plant
- Energy Saving Part-Load Control

### Benefits

- Savings up to 80% over cylinder mode. Nitrogen costs as low as Rs. 15-20 per equivalent nitrogen in bottles.
- Low capital cost
- Energy & manpower efficient
- Reliable and No dependency on external source.
- Small plants available for flow rates as low as few liters per hour.
- Can be installed in remotest of areas as electrical power is only the raw material required.

### Product Range

Flow Rate	5 to 500 Nm <sup>3</sup> /hr
Purity	95% to 99.99%
Pressure	5 Kg/cm <sup>2</sup> g (standard)
At. Dew Point	Up to (-) 80 Deg C



## HEATLESS AIR DRYER

In Heatless desiccant air dryer two adsorber towers filled with Activated Alumina / Molecular Sieves to absorb the moisture present in the wet compressed air. Wet incoming compressed air or gas is passed through an adsorber tower where moisture is adsorbed to achieve better dew point.

The dry air comes through the top of tower. After some time of operation activated alumina needs regeneration. Reactivation or regeneration of activated alumina is necessary to drive off the adsorbed moisture and to restore its absorptive capacity. This is accomplished via purging the adsorbent by desiccant dryer air or gas at atmospheric pressure and temperature in reverse direction.

The purge loss is around 10% of dry air. Changeover will take place through PLC/timer and continuous dry air will be

### Salient Features Of Desiccant Air Dryer

- Simple design filled with Activated Alumina as drying desiccant
- Capacity from 25 SCFM to 2500 SCFM
- Dew Point Range (-) 40 to (-) 60°C
- Pressure Range 5 to 15Kg/cm<sup>2</sup>g
- Long Desiccant Life
- Low initial cost & operational cost
- Requires no maintenance
- Skid mounted modular design

## INTERNALLY HEATED AIR DRYER

This dryer provides an efficient, economical and easy to maintain method of drying compressed air and gases. The drying medium (Silica gel or Activated Alumina) is contained in two carbon steel pressure vessels.

While chamber I is drying, air is passed over an electrical heater embedded in chamber II and carries out the desorbed moisture of this chamber.

This type of system utilizes about 2-3% of the gas as a purge. It is an ideal system for gases requiring ultra low drying like dew points upto (-80°C). Each column remains in line for about 6 hours. For regeneration, the desiccant is heated for about 3 hours and then cooled for another 3 hours before changeover. The operation is fully automatic.

### Internal Heated dryers – Key Features

Inlet Air Temperature	Up to 120°C Degrees Celsius
Operating Pressure	7-150 Bar
Flow Rate (Capacity)	40–10,000 Nm <sup>3</sup> /Hour
Dew Point Temperature	-40°C (As low as -70°C possible on request)
Pressure Drop	0.25 to 0.5 Bar



## AIR RECEIVER

We are among the pioneers in the industry for manufacturing and supplying Air Receivers / Storage Tanks. (Screw Compressor / Reciprocating Compressor) The offered tanks are made in tune with the industry standards.

These tanks are robust in terms of construction, durable, leak proof, non-corrosive and ideal for automobile and electrical industries. Being resistant to wear and tear, it is extensively demanded.

### Features

- ▣ Non-corrosive
- ▣ Seamless finish
- ▣ Long service life

### Specifications

- ▣ Capacity : From 45 Ltrs. (0.045 M<sup>3</sup>) to 10000 Ltr. (10 M<sup>3</sup>)



## CLEAN AIR SOLUTIONS

### DUST COLLECTION SYSTEMS

We are established as one of the leaders in the Clean Air Solution industry. Our experience covers all facets of Dust, Fume, and Industrial Ventilation Control systems for general industrial applications.

Emission parameters are achieved by designing the suction hoods, duct network, velocities and pressure at different points based on ACGIH guidelines.

### Features Of Dust Collectors

- ▣ Dust free operation
- ▣ Minimum utility requirement
- ▣ Customized Solution to suit the site layout and process needs
- ▣ No constraints for the volume flow rate
- ▣ Online and Offline designs
- ▣ Work zone emissions as low as 1-2 mg/Nm<sup>3</sup> at 1 m distance from the source





## BOILER BAG FILTERS

Bag Filters have been our core product since our inception. We offer a wide variety of Bag Filters and Nuisance Filters to suit any flow rate and dust burden. Our Bag Filters offer the highest particulate removal efficiency on the market, far exceeding the most stringent emissions regulations worldwide.

### HIGHLIGHTS

- Flow rates upto 60000m<sup>3</sup>/hr.
- Guaranteed and approved clean gas dust concentrations less than 10 mg/Nm<sup>3</sup>.
- Lower pressure drop across the unit
- Lower consumption of cleaning compressed air
- Longer filter bag life
- Lower noise level during operation
- Highly efficient & quick pulse of cleaning air.
- Effectively clean the bag.

### APPLICATIONS

- Boiler / Thermic Fluidic Heaters
- Minerals / Mining
- Cement Mill
- Coal Mill
- Coal Crushing and Screening
- Bunker / Bin
- Packing Area
- Grinding Mill
- Conveyor Transfer Point
- Paint Booth
- Incineration
- Steel Furnaces (Induction, AOD, Blast, Cupola).
- Buffing/Polishing/Grinding
- Carbon Black/ Rubber
- Glass
- Automobile, Welding



## CENTRIFUGAL BLOWERS

Centrifugal Fans are designed for Air handling, Ventilation, Dust Collection, Fume extraction, hot air systems etc. The capacities range from 200CMH to 5,00,000 CMH. Fans are designed as per AMCA standards and available in MS/SS/GI/FRVE/FRP constructions.

### Features

- Impellers are Dynamically Balanced.
- Customized Drive arrangement
- Providing Inlet / Outlet Damper
- Drain Plug and Inspection window provided
- Customized Drive arrangement
- High Efficiency, Easy Maintainability
- MOC offered in MS, SS, Sail Hard, Hardox.

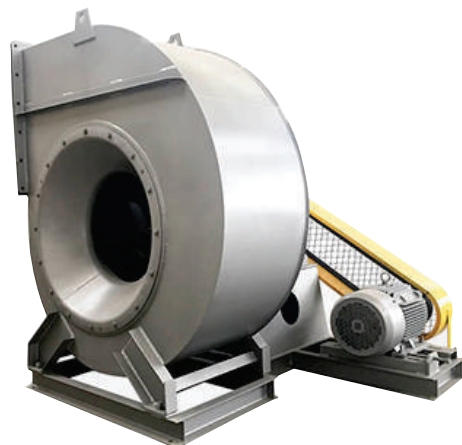


## CYCLONE SEPARATOR

Cyclone Separator are Mechanical Separator using inertia effect & Centrifugal force to separate large dusts and useful particles in industrial applications. Cyclone dust collectors are an air pollution control equipment used to remove large dust particles from industrial process exhausts. The efficiency of Cyclone collectors is high with higher particle size and are normally used as primary collectors in multistage filtration application. In some applications, a properly designed high efficient Cyclone Separator with added filter bags or filter cartridges fitted at exhausts serves as a main collector.

### Features

- High dust collection efficiency
- Low pressure Drop
- Simple and trouble-free operation
- Units available in single, Twin and Quad design construction



## MATERIAL CONVEYING SOLUTIONS

### SCREW CONVEYOR

Screw conveyors have proven to be a reliable and efficient way of conveying bulk materials over many years. With their ability to fully contain the product, screw conveyors are the perfect application for fine flowing, granular or coarse particles.

INERTECH has been leading specialist in the design and manufacture of quality robust screw conveyors.

#### Available Configurations

- ▣ Uniform Diameter and Pitch
- ▣ Variable Pitch Screw Conveyor
- ▣ Inclined Screw Conveyor
- ▣ Flexible Screw Conveyor

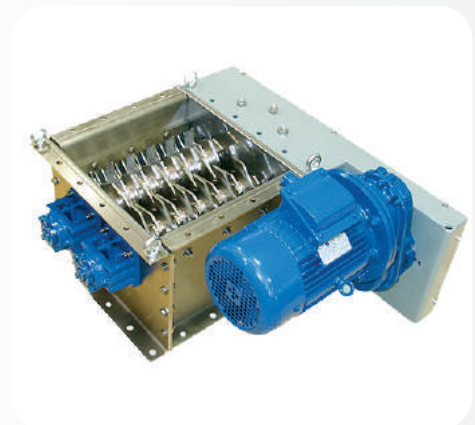


### LUMP BREAKER

Lump Breaker is an equipment which crushes the big size soft lumps into small or desired size by using various screen sizes.

#### Features

- ▣ Material: carbon steel, 304L, SS316L stainless steel
- ▣ Crusher can be installed online or offline as per process requirement
- ▣ Compact low-profile design
- ▣ Contains two rotor shafts equipped with chopping knives and a fixed grid to reduce clearance.
- ▣ Sturdy base frame with support legs to withstand vibrations while crushing
- ▣ Safety key are provided on drive shaft for safety (during an overload issue the key will break itself and prevent major accident)



### ROTARY AIRLOCK VALVE

Inertech Rotary Airlocks Valves are designed to handle the various types of product & various application from metering duties, pneumatic conveying.

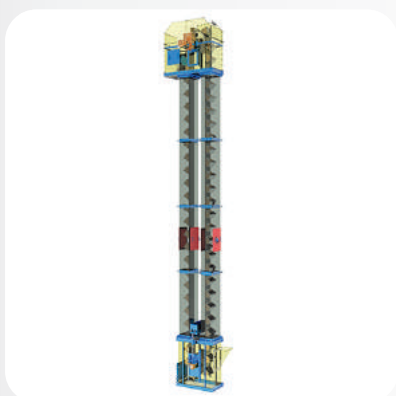
#### Features

- ▣ Available in five sizes from 6" through 14".
- ▣ Round or square flange assures system compatibility.
- ▣ Available in fixed blade and adjustable/replaceable blade type
- ▣ Less clearance valves to ensure no powder degradation while discharging
- ▣ Available in Closed End and Open-End Rotor Design.
- ▣ Control feed, regulated feed by regulating speed of rotor by using VFD in motor
- ▣ Available in direct coupled and Chain driven arrangements



## OTHER PRODUCTS

### BUCKET ELEVATOR



### BELT CONVEYOR



### BAG DUMP STATION



## INDUSTRIES WE SERVE

Pharmaceuticals  
Industry



Chemical  
Industry



Agriculture  
Industry



Food  
Industry



Metal  
Industry



Cement  
Industry



Energy  
Industry



Textile  
Industry

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