

# Clean Air Technologies





### ABOUT US

Shanti Boilers & Pressure Vessels Pvt. Ltd. is one of the leading names in the field of Boilers, heating systems and Clean Air Technologies for over three decades. We are the first to manufacture boilers from the state of Telangana & Andhra Pradesh. Our Management comprises of technically qualified people both at management levels and at the technical support level. Our Business mission is to provide maximum efficiency and sustainable solutions in energy through our products.

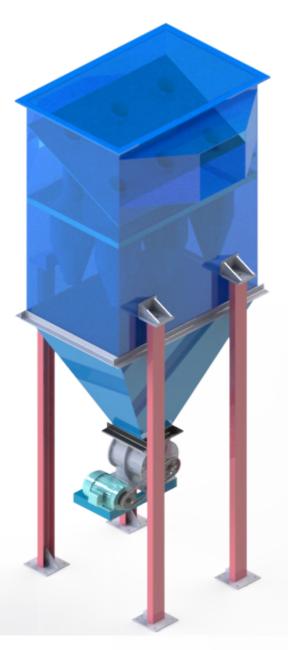
With decades of experience in the process industry we customize integrated solutions for project requirements for a wide range of industries such as Drugs, Pharma, Chemicals, Plywood, Rice Mills, Paper, Dairy, Food Processing and many more areas.

# MULTI CONE DUST COLLECTOR ••••

Multiple-cyclone separators consist of a number of small-diameter cyclones, operating in parallel and having a common gas inlet and outlet, as shown in the figure, and operate on the same principle as single cyclone separators—creating an outer downward vortex and an ascending inner vortex.

Multiple-cyclone separators remove more dust than single cyclone separators because the individual cyclones have a greater length and smaller diameter. The longer length provides longer residence time while the smaller diameter creates greater centrifugal force. These two factors result in better separation of dust particulates. The pressure drop of multiple-cyclone separators collectors is higher than that of single-cyclone separators, requiring more energy to clean the same amount of air. A single-chamber cyclone separator of the same volume is more economical, but doesn't remove as much dust.

Cyclone separators are found in all types of power and industrial applications, including pulp and paper plants, cement plants, steel mills, petroleum coke plants, metal-lurgical plants, saw mills and other kinds of facilities that process dust





# TWIN CYCLONE DUST COLLECTOR •••••

Twin Cyclone Dust Separators (TCDC) consist of two cyclones, operating in parallel and having a common gas inlet and outlet, as shown in the figure, and operate on the same principle as single cyclone separators—creating an outer downward vortex and an ascending inner vortex.

Twin Cyclone Dust Separators remove more dust than single cyclone separators because the individual cyclones have a greater length and diameter. The longer length provides longer residence time while the smaller diameter creates greater centrifugal force. These two factors result in better separation of dust particulates. The pressure drop of multiple-cyclone separators collectors is higher than that of single-cyclone separators, requiring more energy to clean the same amount of air. A single-chamber cyclone separator of the same volume is more economical, but doesn't remove as much dust.

Twin Cyclone Dust Separators are found in all types of power and industrial applications, including pulp and paper plants, cement plants, steel mills, petroleum coke plants, metallurgical plants, saw mills and other kinds of facilities that process dust





Filter Bags (PTFE, Rhyton, Fiber glass with PTFE Coating)



Filter Cage with Ventury (GI Wire with Aluminium Ventury)



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3 way Poppet Damper



Rotary Airlock Valve

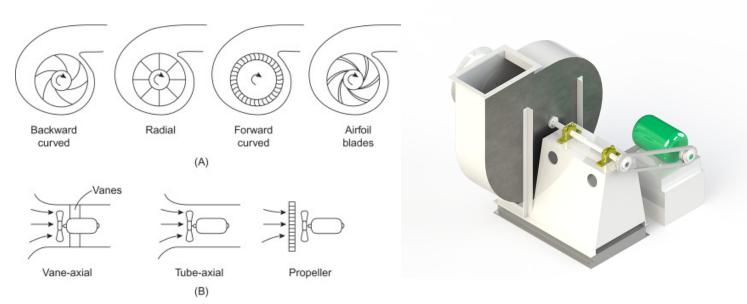




Control with Electronic Timer Card



Pneumatic Solonoid Valve



# **CENTRIFUGAL & AXIAL FANS**

#### **Induced Draft Fan**

Induced draft fan is normally located at the outlet between dust collector and chimney. The fan takes hot flue gases from the boiler through dust collector and delivers it to the chimney into the open atmosphere. ID fan creates negative pressure or suction to discharge the gases out after combustion from the furnace. Since ID fans can handle hot flue gases, they have more corrosion and erosion problems even when used with Bag Filters. The most common type of fans used as ID fans are the backward inclined blade centrifugal fans.

The flow rates of these mechanical fans range from approximately 200 cubic feet (5.7 m3) to 2,000,000 cubic feet (57,000 m3) per minute. A blower is another name for a fan that operates where the resistance to the flow is primarily on the downstream side of the fan.







#### **FORCED DRAFT FANS**

FD fan draws air from the atmosphere and forces it into the furnace through a preheater. These fans are located at the inlet of the boiler to push high pressure fresh air into combustion chamber, where it mixes with the fuel to produce positive pressure. The most common centrifugal fans used as FD fans are backward curved and airfoil centrifugal fans. In power plants, where coal is used as fuel for combustion, FD fans are used as primary and secondary air fans to regulate proper combustion and maximize the fuel efficiency of the process.

A typical FD fan arrangement uses inlet and outlet dampers to control and maintain the required air pressure inside the system. These fans have a wheel at the center that is hung on the shaft along with inlet boxes, silencer, filter and rain hood. When compared to ID fans, FD fans are easier to maintain and have cleaner operating conditions.

It has a wide application in pneumatic conveying, combustion and drying applications.



#### **AXIAL FAN**

Rotary Air Valve (RAV) consist of Rotor Shaft with vanes housing, Head Plates, Packing Seals and bearings coupled to a gear box and motor. It is available in cast iron (CI), Carbon Steel, Stainless Steel (SS) 304, 316 Hardened Steel in 6", 8", 10" and 12". It has a vide application in industries to remove Dry flowing powders, Granules, Grains, Cereals and Fly - ash.



# ROTARY AIR LOCK VALVE (RAV)

Rotary Air Valve (RAV) consist of Rotor Shaft with vanes housing, Head Plates, Packing Seals and bearings coupled to a gear box and motor. It is available in cast iron (CI), Carbon Steel, Stainless Steel (SS) 304, 316 Hardened Steel in 6", 8", 10" and 12". It has a vide application in industries to remove Dry flowing powders, Granules, Grains, Cereals and Fly - ash.

Industries requiring this type include Cement, Chemical, Mining, Food Rubber etc. It is ideal for Pollution Control Applications.



# OUR PRODUCTS

- INDUSTRIAL BOILERS (Coal / Husk / Oil / Gas / Agro Fuels Fired)
- COGENERATION PLANTS
- FLUIDIZED BED BOILERS (Coal / Husk / Agro Fuels)
- THERMIC FLUID HEATER (Coal / Husk / Oil / Gas / Agro Fuels Fired)
- SMALL INDUSTRIAL BOILERS
- POLLUTION CONTROL EQUIPMENTS (BAG FILTER / DUST COLLECTOR / WET SCRUBBER)
- INDUSTRIAL BLOWERS (ID & FD FANS, PA FANS)
- INDUSTRIAL BURNERS & BURNER SPARES
- PRESSURE VESSELS & AUTOCLAVES ( AS ASME & IBR CODES)
- HEAVY FABRICATION OF BALANCE OF PLANT
- BOILER ERECTION & STEAM PIPING
- WASTE WATER TREATMENT PLANTS
- WATER TREATMENT PLANTS
- ECONOMIZER, SUPER HEATERS, MEMBRANE PANEL ASSEMBLY
- SOLAR PV & THERMAL SYSTEMS







OFFICE / CHANNEL PARTNER

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