

# ENGINEERED TO DELIVER

**Bulk Material Handling Products** 

**Engineering Services** 

Turnkey Projects



Aerial view of the manufacturing facility @Hyderabad, India

# TURBOVENT

Turbovent is part of the Parasakti Group of companies involved in manufacture of Cement, Building Materials & Textiles

Turbovent was founded in 1993 to manufacture high quality equipment for Air Handling and Bulk Solids Handling Industries.

Turbovent is an ISO 9001:2015 company with a modern fabrication and machining workshop spanning approximately ~1.00,000 square feet of covered space.

Our Product range includes Screw Conveyors, Rotary Air Lock Valves, Chain conveyors, Bucket Elevators, Feeders, Screens, Crushers and several types of control Gates.

### **Strategic Partners**







### SCREW CONVEYORS

We have vast experience in design and manufacture of Heavy-Duty Screw Conveyors. We successfully supplied and commissioned one of India's longest Screw Conveyor spanning a length of 11 meters without using any in between hanger bearings.

- Material of construction varies (mild steel & stainless steel) depending on the type of product conveyed. Further, for longer conveyors, specially designed hanger bearings are provided to minimize screw deflection.
- Our screw conveyors can be fitted with various types of screw flights (standard flights, ribbon flights, cut-flights, paddle flights or jacketed flights).
- All our screw flights are manufactured in house, thereby giving our customers 100% reliability on quality and delivery.
- We supply screw conveyors for special applications such as screw feeder with variable pitch flights, cantilever beam type screw conveyor, double shaft pug mill type dust conditioner, jacketed flight/trough type screw conveyor for material conveying & cooling.



**U-Type Screw Conveyors** 



**Water Jacketed Screw Conveyor** 



**Pipe Screw Conveyor** 



**Ash Conditioner** 

# ROTARY AIR LOCK VALVES

We provide a complete range of Rotary Airlock Valves (RAV's) used in bulk handling systems that enable free flow of various type of materials (dry powder, granular, crystal, pellets etc.).

We have supplied RAV's with throughput ranging from 1 ton per hour to 500 tons per hour.

### Available In:

- Square & Round Flange design
- Cl: FG 260 , 15:210 / 15:4896 / 15:4522, Mild Steel & Stainless Steel Constructions.
- Medium duty (Dia 200 mm to Dia 400 mm ) and Heavy duty (Dia 200 to Dia 760) variants
- ❖ Application specific design

#### **Technical Features:**

- Adjustable wear tips in spring steel/SS/Hardox.
- Air purge facility for purging seals, helps in dusty condition.
- 65-120 microns clearance for optimum leakage prevention.
- 6 or 8 vane rotor (Closed / Open). Closed end rotors reduce air leakage.

MODEL	MEDIUM DUTY*	HEAVY DUTY
DIA 200	<b>✓</b>	<b>✓</b>
DIA 250	<b>✓</b>	✓
DIA 300	<b>✓</b>	✓
DIA 350	<b>✓</b>	<b>✓</b>
DIA 400	✓	<b>✓</b>
DIA 450		<b>V</b>
DIA 500		<b>✓</b>
DIA 560		✓
DIA 650		<b>✓</b>
DIA 760**		<b>✓</b>

\*preferred for bag filter and medium duty applications



**Drop Through Airlocks** 



**Side Entry Airlocks** 



**Blow Through Airlocks** 



**Customized Heavy Duty Rotary Airlocks** 

<sup>\*\*</sup> Above 760 to 2000 Fabricated only

# ROTARY SLUICES

Rotary Sluice is a special type of RAV that can be used in applications where lumpy materials have to be fed into downstream process. It is most commonly used to control input feed into Vertical Roller Mills {VRM's}. Moreover, Rotary Sluice's can be used to handle wet or moist materials like limestone, clay, iron ore and blast furnace slag.

We manufacture Rotary Sluice's that can handle throughput capacity from 1 ton per hour to 150 ton per hour with inlet opening sizes ranging from 560 mm to 2000 mm in both round or square shape.

#### **Key Advantages:**

- \* Reduces risk of unexpected stops, thereby ensuring mill performance.
- Heated sluice allows handling and conveying of hygroscopic materials.

### **Typical Applications:**

- ❖ VRM raw mill, typical feed size up to 100mm
- VRM coal mill, typical feed size up to 100mm
- VRM cement mill, typical feed size up to 100mm
- VRM slag mill, typical feed size up to 5mm
- ♦ Ball mill, typical feed size up to maximum 75mm
- Flash drying, typical feed size up to maximum 75mm

#### **Technical Features:**

- ♦ For trouble-free operation the sluice design is based on a low-speed six-chamber rotor.
- The rotor design ensures that at least one of the vanes is always in contact with each side of the housing, ensuring very low ingress of air. The 60 degree opening angle within the six chambers reduces the risk of material sticking inside the rotor during operation.





# **BUCKET ELEVATORS**

Bucket Elevators are used to transport bulk solids vertically. Reliable design of top and bottom hoods and careful selection and manufacture of bucket components reduces the operating costs and increases uptime of our bucket elevators.

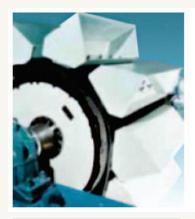
Bucket elevators are available in both chain type and belt type construction. They can be used to convey products like Cement, Clinker, Coal, Bauxite, Sugar, Fly Ash, Gypsum, Limestone, Iron Ore, Sand etc.

#### **Construction Details:**

- \* Elevator casings with reinforced corners to maintain structural rigidity and straightness.
- Inspection doors at all accessible locations. Flanged discharge hood with inspection door.
- \* Heavy-duty steel boots and frames with manual or gravity take-up.
- \* Removable boot panels for sprocket and pulley maintenance.
- Various wear liner options for boot and discharge.
- Heavy-duty shaft bearing supports on head sections.
- \* Safety components such as zero-speed switch, backstop and belt alignment included as standard.







Belt Bucket
Top casing Sectional View



Belt Bucket Elevator Bucket fixing Arrangement



View of Wing Pulley for Belt Bucket Elevators

### **DRAG CHAIN CONVEYORS**

Drag Chain Conveyors enable movement of materials over long centre distances and steep inclined positions. They are designed to convey wide variety of powdery, granular and lumpy bulk materials. Our proven design and usage of high quality components provides required performance and ensures trouble free operation.

#### **Technical Features:**

- Throughput capacity of up to 300 m3/hr and conveyor length of up to 60 meters.
- Casings are built from heavy gauge steel plates for providing structural rigidity.
- Material can be conveyed either by single or double strand forged or case-hardened chain links.
- Wear resistant guide rails are provided in conveying and return path for longevity.
- Specially designed flight attachments are welded/bolted to the chain links as per application. The flights attachments are generally bolt-on type design for ease of replacement.
- Sprockets are fabricated or cast from carbon steel and are hardened for longer service.
- Catenary take ups are provided to accommodate thermal expansion of chain in high temperature applications.



**Chain Arrangement** 



**Take-up Arrangement** 



High Temperature dust-proof housing that can also be gas Tight



Heavy dust-proof housing that can also be gas tight

# OTHER PRODUCTS



**Manual Slide Gates** 



**Pneumatic Slide Gates** 



**Motorized Slide Gates** 



**Belt Conveyors** 



**Motorised Diverting Gates** 



Discharge Gates



**Screw Samplers** 



**Multi Louver Dampers** 



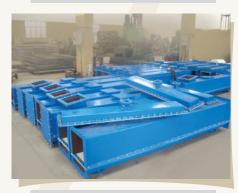
Flap Valves



**Cement Blender** 



**Rod Gates** 



**Air Slides** 

# OTHER PRODUCTS/



**Junction Boxes** 



**Metallic Expansion Bellows** 



**Non Metallic Bellows** 



**Air Slide Diverter** 



**Bale Breakers** 



Screens



Mill Diaphragm



**Roller press base frames** 



Silos



Hoppers



**Bag Filters** 



Cyclones

### **SPECIALITY PRODUCTS**

### Speciality (Customer / OEM Design) Product Manufacturing:

At Turbovent we manufacture several equipment based on end customer or OEM (Original Equipment Manufacturer) design. Not only did we manufacture specialised products like Pre-Heating screw (handling bauxite ore) and Vertical Mill Casings but we also manufactured standard equipment like Screw Conveyors, Chain Conveyors and Bucket Elevators based on OEM design specifications.

Further, in the recent past we have also taken up sourcing assignments to manufacture Ball Mills for ceramic application for an OEM based out of mainland Europe.

Our track record of honouring and safe guarding the intellectual property of our customers and ensuring that equipment meets desired quality has resulted in us getting repeated orders.



Mill Feed Rotary Valve / Rotory Sluice



**Pre Heating Screw** 



**Ball Mills for Ceramic Industry Application** 

### TURNKEY PROJECTS



### **BRIQUETTES HANDLING:**

Material: Briquettes (Wood)

Equipments: Hopper, Vibrating Feeder, Chain conveyor, Crusher, DE System

Material: Coal, Husk, Bagasse

Equipments: Chain Conveyors, Belt Conveyors, Crusher, Hoppers, Vibrating Feeders, RAV





WOOD DUST HANDLING:

Material: Wood Dust

Equipments: Screw Conveyors, Chain conveyors, Bucket Elevators, Hopper, Cyclones, and

MINERAL HANDLING:

Material: Mineral

Equipments: Screw Conveyors, Belt Conveyor, Bucket Elevators, Hopper, Weigh Feeder and



### **ENGINEERING SERVICES**

Our team has more than 25 years of combined experience in designing bulk solids handling industrial processes. We have licenses to use state-of-the-art SIEMENS software for CAD, CAM, FEA and CFO applications that enable us to recommend optimum solutions.

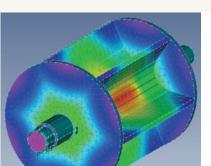
#### **APPLICATIONS**

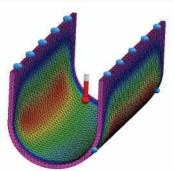




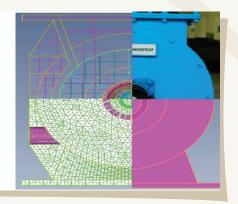






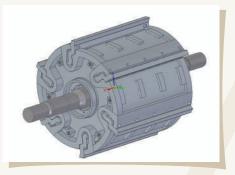


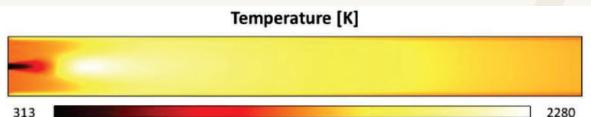
Siemens PLM Software



### **Cement Industry Focus:**

- CFO and particle study analysis to analyze pressure, temperature and velocities of fluid and feed Particles in cyclone/ calciner / Bag House/ ESP/ Air pre heater lines.
- CFO analysis of ducts to improve duct flow and its distribution without creating turbulence.
- CFO analysis to study and improve the efficiency of conveying equipment.





# KEY MACHINES /



Multitherm ECO CNC plasma profile cutting machine can handle 10 m x 4 m x 50 mm thk



Hydraulic press of 400 tons capacity



**Vertical Lathe Machine (VTL)** 



**Lathe Machine** 



Enclosed grit blasting room of size 8 m x 8 m x 5 m



Enclosed paint room of size 8 m x 8 m x 5 m

### **QUALITY MANAGEMENT SYSTEM**

At Turbovent we lay highest emphasis on the quality of our products and processes. We are highly focused on ensuring prompt delivery, attentive installation & thorough after sales support. We believe quality is the end result of creating an effective plan, documenting the same and then following it up relentlessly for smooth execution. To achieve this:

- We maintain in process inspection check lists & QAP's to ensure usage of right materials and to avoid reworks.
  - We train our welders and maintain approved WPS & PQR for all our welding procedures as per ASME section IX.
- We deploy experienced supervisors and managers who have had extensive experience in working with all global OEM's like FLS, TKII, KHD, Pfeiffer, Valmet etc.

### **QUALITY CERTIFICATION**



# **MAJOR CLIENTS**













































































































# FOR BUSINESS

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