

PRODUCT CATALOGUE

1. PNEUMATIC CONVEYING SYSTEM

Kalpataru offers high quality pneumatic conveying system for various applications. We are eastern India's leading suppliers of such system.



Salient features of our system:

Dust free Cast alloy steel, stainless or mild steel pressure/vacuum systems
Dense phase,
Dilute (Lean) phase,
Pressure-Vacuum systems for Ash, Bed ash & Bag filter dust
Sophisticated controls
Positive pressure lean phase systems

To Cater the wide range of industries:

Power plants
Iron & Steel Industries, Sponge Iron plants
Cement plants
Mineral & Mining
Chemical
Sugar, Rice
Pharmaceutical
Foundry, Plastic

Kalpataru Offers Full engineering service, from concept to commissioning

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Works :
Jalan Industrial Complex Howrah
Tel : (+) 91 - 33 - 3290 0662

PRODUCT CATALOGUE

2. BELT CONVEYOR & SPARES

(STANDARDS: IS: 11592 - 1985)



We offer a range of robustly constructed Belt Conveyors, which are used for carrying material from one location to another. Our equipment works on an automated system, which requires minimum man power. Available in different lengths and widths, we can also customize our product to suit different kinds of applications.



Kalpataru's pulleys are manufactured with the following specifications: \

- Shell diameter - 127mm to 1250mm
- Shell length - 500mm to 2300mm
- Shell thickness - 6mm to 40.5mm
- Shaft diameter - 38.1mm to 406.4mm \ Shaft length - 500mm to 3000mm



Kalpataru's idlers are manufactured with the following specifications: \

- Belt width - 400mm to 2000mm
- Belt carrying capacity - 3 TPH onwards
- Belt speed - 0.5 m/sec to 5 m/sec
- Roller diameter - 48.3 mm to 219.1 mm

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2a. SLIDER BED / CARTON CONVEYORS



Kalpataru's Slider bed conveyors are designed with channel frames and bolt in pans. Frame design makes it ideal for matching up with roller bed conveyors.

Bed – 150 mm x 12 ga. formed steel channel
powder painted with galvanized bed pans

Overall Frame Width range: 400 to 2000 mm

Center Drive (standard)

Adjustable Floor Supports Available

Reversible



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2b. SWIVEL CHUTE BELT CONVEYOR



Swivel chute belt conveyor for compartment plant 400 to 800 wide & 10000 mm to 30000 mm Long, Capacity – up to 200 TPH. Belt discharge material in top swivel chute mounted on 4 compartment structure. Swivel chute rotate to position in particular bin. Belt installation in 28 degree accommodates less space. Safety pull cord & emergency switches ensures complete safe operation. Stepped walkway makes it easy for access & maintenance. Reputed make motor / gearbox & rollers ensure reliable operation.



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2c. LOADING CONVEYOR



Conveyor Length	As per requirement
C Conveyor Width	As per requirement
Conveyor Input Height	As per requirement
Conveyor Output Height	Adjustable by Hydraulic motorised Ball screw arrangement. From 800 to 2400mm
Belt Material	PVC anti skidding belt.
Conveyor Type	Dock less truck loading conveyor
Conveyor Frame	MS powder coating
Conveyor Stand	MS powder coating
Ground support	Wheels
Speed of conveyor	Adjustable Speed 10 - 20 mtr/min
Component to convey	Carton boxes, Totes, Crates.
Capacity	50 Kg/ft.

PRODUCT CATALOGUE

3. SCREW CONVEYOR

(STANDARDS: IS: 5563 – 1985, IS: 12960 - 1990)



Kalpataru's Screw Conveyors are used in many industries including cement, chemical, food, mining and wastewater treatment industries for conveying and elevating bulk materials.

Heavy-Duty Construction – To Increase Life and Reduce Downtime
Totally Enclosed Design – To Eliminate Dust or Vapor Emissions
Modular Construction – To Reduce Total Cost of Ownership
Multiple Discharge Points – To Distribute Materials to Process Equipment
High Torque Drive Units – To Power Through Upset Conditions

Shafted Screw Conveyors
Shaft less Screw
Conveyors Vertical Screw
Conveyors Inclined Screw
Conveyors Screw Feeders
Multiple-Screw Live Bottom Feeders



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3a. ASH CONDITIONER & PUGMILL MIXER



The ash conditioner is a totally enclosed, paddle type mixer designed to condition fly ash, bottom ash, and other abrasive or dusty materials. The unit features the ability to accurately control both the material feed rate and the water supply flow rate, as well as ensure a complete and controlled mixing prior to discharge. In this manner, the fly ash or other material can be precisely conditioned with minimum water usage.

The KALPATARU ASH CONDITIONER is a horizontal mixing, conditioning and agglomerating device. Its design is based on a horizontal - U - type trough with dual shafts and paddles extending the length of the trough. The action of the pitched paddles moves the material from the bottom of the trough up each side and forces the material back down between the shafts. This will create a kneading and folding over effect, which will give an intimate mixture of materials. Where the paddle mixer is used for conditioning or agglomerating, a liquid spray system is added for dispersing the binder.

Our Ash conditioner has twin shafted paddles and is fitted with internal water spray bars. Given the abrasive nature of the mixed powder, the paddles are constructed in hard wearing carbon steel plate. The specially designed paddles are easily removed and replaced at the end of their serviceable life. The mixer is designed for one-man operation and includes quick release covers with a counterbalance arrangement to allow easy access to the screws for cleaning. The main features of our ASH CONDITIONER are:

- Precise water control
- Uniform, consistent forced wetting
- Continuous material flow
- Counter-rotating mixing paddles for complete wetting
- Totally enclosed mechanism for dust-free operation
- Easy maintenance



PRODUCT CATALOGUE

3b. AGITATOR MIXERS



Kalpataru manufactures many types of continuous process mixers involving paddle screws, ribbon screws, cut and folded flight, etc. We also offer batch mixers with similar designs but longer retention times. Both types are available in various varieties including:

Sanitary / Food Grade designs

Hardened, wear resistant mixing components

Single, twin, and multiple agitator designs

Materials of construction include:

304/316 stainless

steel Carbon steel

Hot-dipped galvanized

steel Hardened alloys

Etc.



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4. SUBMERGED WET SCRAPER CONVEYOR



Kalpataru is the leader in the manufacturing and supply of Wet Scraper Conveyors. The offered wet scraper conveyors are widely used as dust collectors, in coal mines, sugar industries and industrial furnaces. Our offered conveyors are double stranded and inclined at tail & drive ends. The offered conveyors operate at very low speeds, which ensures longer functional life and reduced wearing. Our offered conveyor is the first choice of steel and iron plants across the country.

WET SCRAPER (DOUBLE INCLINED)

1	APPLICATION	To collect and transfer dust from Evaporating Cooler, GCT, DSC, Boiler, etc.
2	LOCATION	Below Evaporating Cooler, GCT, DSC, Boiler, etc.
3	MATERIAL to be handled	CHAR/FLY ASH/FURNACE BOTTOM ASH/MOLTEN SLAG
4	TEMPERATURE Range	900 °C to 95 °C
5	Design CAPACITY	3 TPH, 5 TPH, 10 TPH, 20 TPH
6	CONVEYOR SIZES	
	a)Center to Center	7000mm , 9500mm , 10500mm , 11500mm
	b)Feed to Discharge center	4000mm , 7000mm , 8000mm , 9000mm
	c)Cabinet	600x800 mm , 800x800 mm , 800x1000 mm , 1000x1200 mm
7	GRADIENT	Up to 35 °
8	CHAIN	FLAT FORGED CHAIN, ROUND LINK FORGED CHAIN
9	CHAIN Pitch (mm)	64.5, 75, 86, 92, 102, 125, 142, 150, 200, 260
10	CHAIN: MOC	20MnCr5, 16MnCr5, 42CrMo4, En 353, En 24, En 8, C 45
11	CHAIN: SPEED	0.5 to 3 Mtr. Per minute
12	TROUGH: MOC	IS: 2062
13	WEAR LINER: MOC	SAILMA, TISCRA, Manganese steel, Cast Basalt

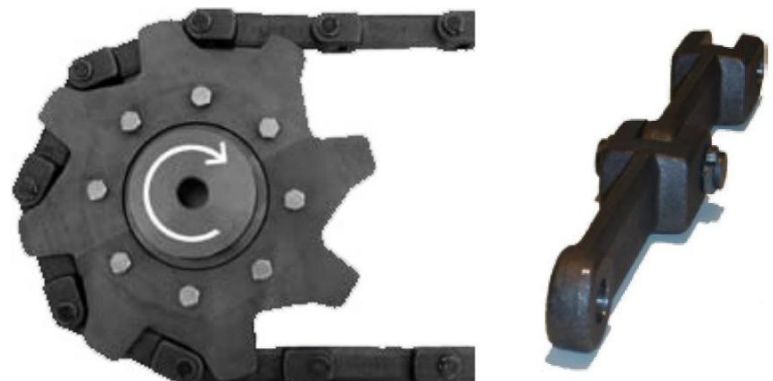
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4a. FORGED CHAIN LINK, SPROCKET & TRAILING WHEEL



FLAT FORGED CHAIN LINKS



Material available for Chain Links : Hardened – C45, En 8, En 353, 20MnCr5

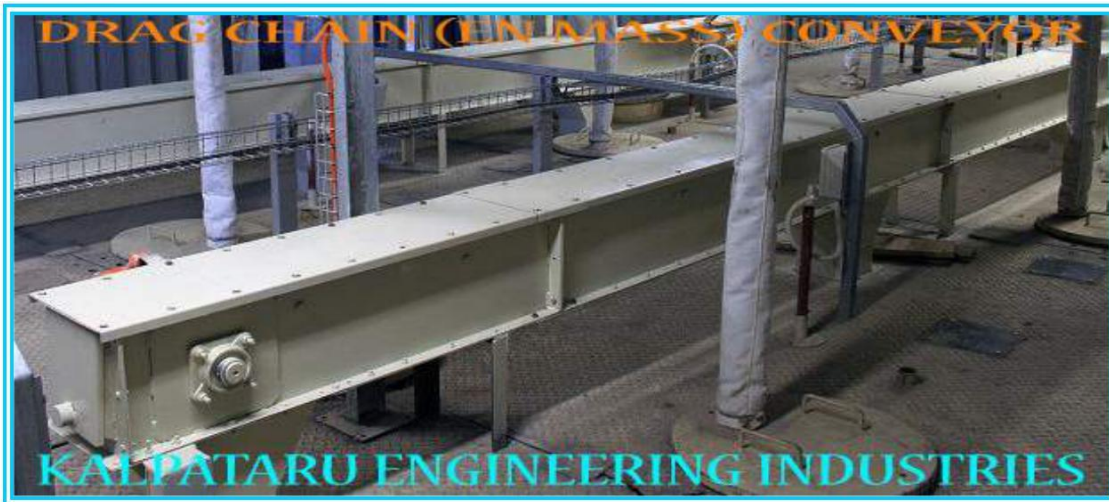
The Breaking Load depends upon the Chain material.

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5. DRAG CHAIN (EN MASS) CONVEYOR



1. Standard Enmass Drag chain conveyors are made out of carbon steel or SS.
2. Used for carrying abrasive, moderately abrasive and non-abrasive items.
3. The speed of chain link depends upon material character and restricted to 0.3 m/sec.
4. Wear liner shall be provided according to material characteristic of MOC shall be Hard/Hardox 400.
5. Chain shall be selected as per DIN standard 20MnCr5 OR equivalent IS 4432 standard.
6. Shaft selection shall be done according to BS 970.
7. Sprocket shall be split type construction.
8. According to machine width of conveyor will have single strand or double strand.
9. Low power consumption as compared to other conveying capital equipments.
10. Wide range of materials can be handled.
11. Design for dust and vapor-tight requirements hence eco-friendly.
12. Multiple inlet and outlet points will allow the equipment have intake and discharge flexibility.
13. Being a tailor made design; capacity can be designed as per customer requirement.
14. Length can be varied as per customer requirement from the range of from 3mtrs to 160mtrs.
15. Drag Chain Conveyors are designed for horizontal, inclined and vertical transport of sawdust, chips and other bulk goods.



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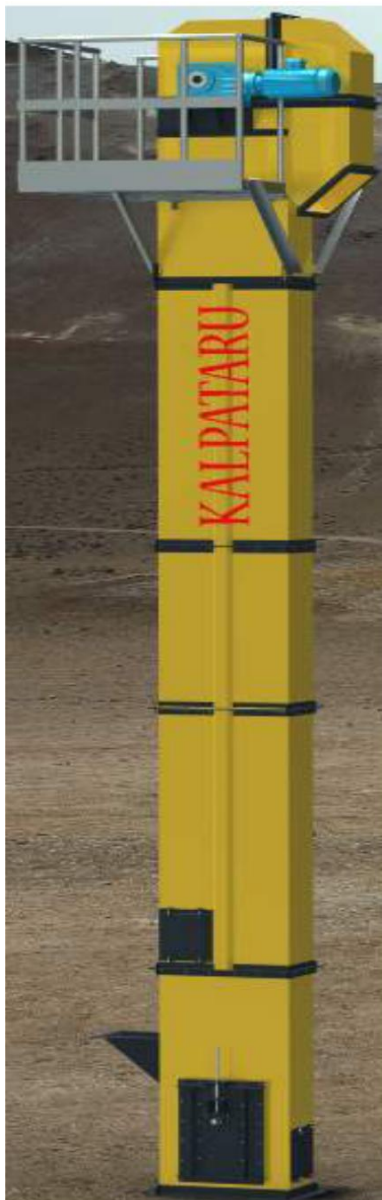
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6. BUCKET ELEVATORS

(STANDARDS: IS: 6833 – 1973, IS: 6930 – 1973, IS: 7167 – 1974)

Bucket elevator is a material handling equipment required to convey the material in vertical direction. Basically are employed convey the fine powder to lump size particle. Normally size varies from 500 micron to 30 mm. Conveying buckets are mounted either on **BELT or CHAIN** as per material character.



- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Standard bucket elevators are made out of carbon steel. 2. Design & Manufacturing as per IS7074-1973 standard. 3. Percentage filling of bucket depends upon particle size. 4. Filling factor decides the discharge capacity of bucket elevator. 5. Gravity take up tensioning arrangement is provided at the boot section of bucket elevator. 6. In case of higher temperature material, buckets are mounted on chain, similarly for lower temperature application, buckets are mounted on belt. 7. Self supporting design can be provided up to 25 meters and above it calls for external support. 8. Chain design is based on the DIN / IS standards. | <p>KALPATARU bucket elevators offer optimal solutions for vertical transportation of fertilizer, potash and salt, cement, sand or gravel, among other materials.</p> <p>We design, fit and manufacture complete bucket elevators using round steel chains, plate link chains or belts as traction mechanisms.</p> <p>In transporting cement, lime, gypsum, salt and fertilizer, all our bucket elevator components are always perfectly coordinated to provide a reliable, long-lasting system.</p> |
|---|---|



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6a. BUCKETS



Kalpataru is a prominent A-Type Steel Elevator Buckets Manufacturer and Supplier in India. Our A-Type Steel Elevator Buckets have maximum volume capacity due to their unique design, quality, and accuracy. A-Type Seamless Steel Elevator Buckets having good strength and impact resistance are used in various Industries for like cement, chemical, Limestone, gravel, rice, wheat, coffee, sugar, etc. and where the mechanical handling of the materials are preferred.

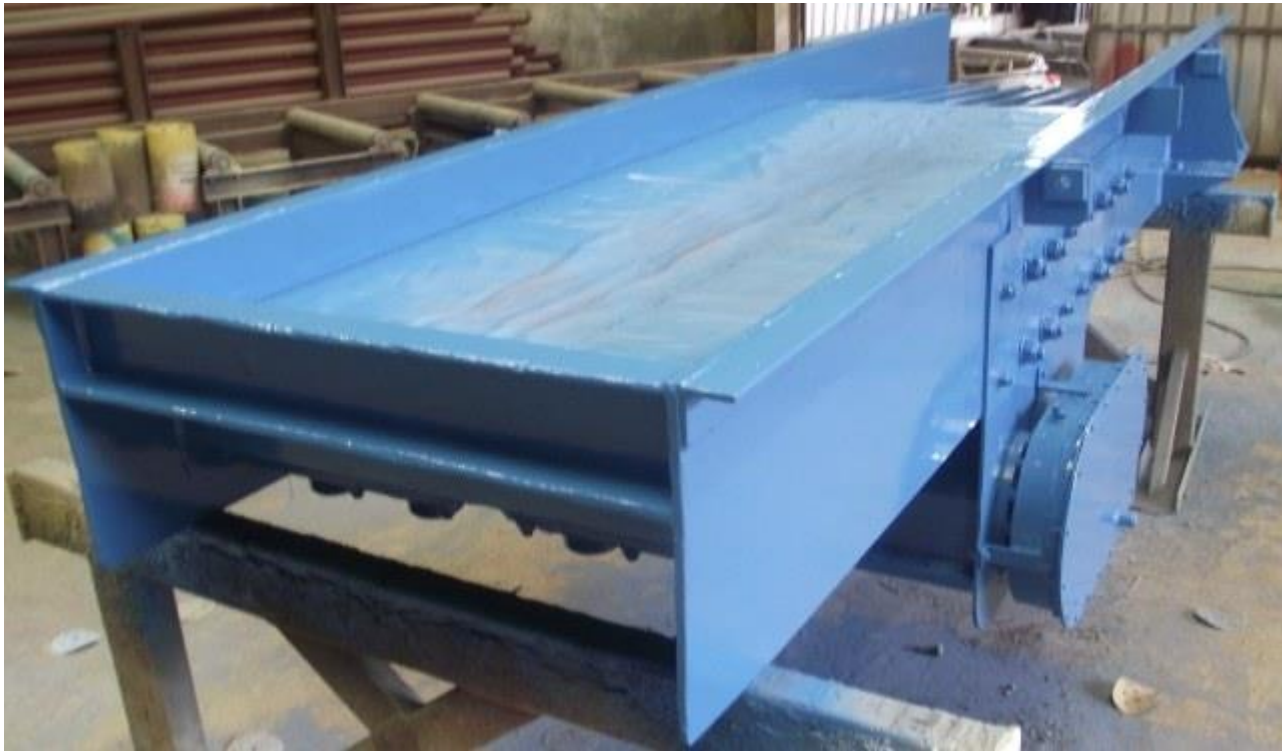


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7. VIBRATORY FEEDER



Kalpataru manufactures vibratory feeders that are used in conjunction with our other systems. Vibratory feeders use both vibration and gravity to convey material. Our vibratory feeders are used in a wide range of industries like power, agriculture, processing, sugar, cement, steel etc. Kalpataru vibratory feeders have low maintenance cost, applies to a wide range of materials, smooth vibration, reliable operation and grid like design to prevent material blockage. Our Vibratory feeders come with 3 types of drive locations below deck, side-mount, above deck and with a variety of discharge options depending upon the requirement.

PRODUCT CATALOGUE

8. PULSE JET BAG FILTER SYSTEM



Kalpataru manufactures and supplies good quality Pulse Jet Bag Filter Systems. These filter systems are manufactured in accordance with industry set quality parameters, are appreciated for their excellent filtration, easy installation, long work life and limited power consumption.

High Filtration efficiency of Bag Filter system (up to 99.5%) thus superior emission norms (15-50mg/Nm³).

Low pressure drop across Bag Filter system (80-150 mm WC).

Low power consumption of ID Fan due to low DP across Bag Filter system.

Use of double diaphragm solenoid valves ensure effective cleaning of Filter Bags.

Proper design of Bag Filter system, Hopper Angle and other critical aspects results in effective dust collection and removes possibilities of dust re-entrapment.

Longer life of Filter Bags, Cages and other accessories thus lower cost of operation.

We can design Pulse Jet Bag Filter system up to 100000 m³/hr. suitable for up to 260 Deg C for dust/fumes with acid/alkali content and fine micron sticky dust. Bag Filter systems can be supplied in MS/SS-304/SS-316-L to meet application requirement.



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9. ROTARY AIR LOCK



Kalpataru's rotary airlock is an ideal choice for handling many dry, free-flowing powders where a pressure differential exists, such as when feeding pneumatic conveying lines. Constructed from either stainless steel or cast iron, our RAL withstands extremely high temperature applications. The Rotary Airlocks are available in all standard as well as customized convenient sizes with optional coatings or construction materials available for handling abrasive or corrosive materials and equipped with chain drive gear-motors and your choice of speed. Inlets and outlets are available in many common sizes and we also offer designs built to your unique application.



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10. KNIFE & SLIDE GATES

Kalpataru's Slide Gates are used to control the discharge of bulk materials from hoppers, bins, silos or conveyors. Slide Gates consist of a rigid frame mounted to the bottom of the storage device or conveyor. A slide plate is located inside the frame that either opens or closes against the flow of material. The slide plate can be moved by manual, pneumatic, electric or hydraulic means.

Kalpataru's Slide Gates are used in many industries including aggregate, cement, chemical, and mining and wastewater treatment industries for controlling the flow of bulk materials.

Kalpataru's has a standard line of industrial slide gates or can design and manufacture slide gates to meet specific customer requirements.

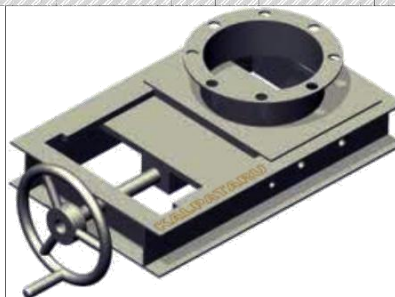
Available Features and Options

Wide Range Of Construction Materials - To Reduce Corrosion or Abrasion
Heavy-Duty Construction - To Increase Life and Reduce Downtime
Totally Enclosed Design - To Eliminate Dust or Vapor Emissions
Custom Seal Design - To Prevent Material Leakage
Heavy-Duty Rollers - To Prevent Gate Blade Jamming



Available Configurations

- ☐ Flat Slide Gate
- ☐ Curved Slide Gate
- ☐ Dust Tight Slide Gate
- ☐ Diverter Gate



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11. DIVERTER GATES

Diverter gates typically divert vertical free flow of material from one source to a choice of two other points. It is often utilized in redundant or multi-destination conveyor systems. Because this is usually achieved with a 90° flap type gate blade an electric one quarter turn actuator are often used for simplicity.

Specifications:

The diverter gate offers high operating efficiency and long life. Body, end plates, and gate are fabricated, fully ribbed to ensure dimensional stability.

The diverter gate and shaft are machined to close tolerances to prevent leakage and ensure smooth operation. Bearings are of the non-lubricating type. Lip-type shaft seals provide leak proof performance.

Materials of construction:

This product is available in either IS: 2062 or 304 stainless steel. Bearings are SKF/FAG, and lip seals are nitrile. Other seal materials are available.

Temperature:

Standard gates are suitable for material temperature up to 107°C. Special seals accommodate higher operating temperatures.

Operation: Manual

Hand-operated gates include a manual-operated lever with locking pin.



Air-operated:

The air-operated diverter gate includes an actuator and a solenoid valve with two separate speed controls. The operator is factory lubricated and sealed, requiring no further lubrication under normal operating conditions. The air operator is direct connected with totally enclosed rack and pinion. The solenoid valve has manual override capability. The actuator and solenoid valve is furnished complete with all interconnecting piping. The control voltage for the solenoids is 120V 60 Hz. 50 to 80 PSIG (3.5 to 5.6 Kg/cm²) clean plant air is required.

Motor Operated:

Electric-motor-operated gates are of direct coupled or of a chain and sprocket design. They are furnished with geared motor with VVVF. 230/460 volt, 3-phase, 60 Hz operation is standard.

Special Order Options

- All gates are furnished with two limit switches for direction control and position indication. These switches can be provided in NEMA 4, 7 and 9.
- Explosion-proof motor and uni-brake, and solenoid valves can be provided.
- Guards are available for all models and modes of operation.