- Chemical • Petrochemical
- Nuclear Power Plants • Refinery • Fertilizer
- Paper • Food & Beverages • Evaporation & Effluent Treatment Plants • Slurries
About Us

JAY AMBE ENGINEERING COMPANY (JEC) is established in 1996 with the manufacturing of centrifugal pumps of different sizes & capacities. At the helm of the organization is a young & dynamic technocrat Mr. Rajesh Patel who is having practical experience in the field of fluid handling and knack in metallurgy, design & understanding application to offer most suitable, reliable, reasonable quality product within shortest delivery frame.

In a short span of time, company made an extraordinary growth under the wonderful guidance & leadership of Mr. Rajesh Patel and his brother Mr. Jaldhaj Patel by extending the product range in centrifugal pumps and added manufacturing of pinch valves and wide range of other industrial valves. Today, JAY AMBE ENGINEERING Co. is India’s one of the leading centrifugal pumps & valves manufacturing company.

JEC Pumps are specialized to handle all forms of fluids transfer be it clear, corrosive liquids or slurry pumping. We believe in accepting challenges and offer tailor made solutions to fulfill customer requirements.

JEC is an ISO 9001:2008 certified company and has successfully implemented the quality management system at each & every level of the organization through close supervision & stringent Quality Checks. JEC is equipped with all latest technology & machineries to produce world class quality products having utmost precision at every level.

JEC believes in continual improvement in products & systems to cater to emerging requirements of the customers and to enhance the customer satisfaction. R&D team of JEC pumps is comprised of highly qualified & experienced technocrats working under the guidance of Mr. S. L. Aryanbarkar (Technical Advisor of Indian Pump Manufacturing Association) a well renowned name in the pump industry that innovates world class products / solutions and satisfy critical requirements of the customers.

Highly Vigilant & resourceful management team supported by committed & dedicated employees have made the JAY AMBE ENGINEERING COMPANY a renowned name in the India as well as in the few of the foreign countries.

Our Mission

To extend the product range as per the international standard with fully mechanized and state of the art technology to penetrate the National & International market.

Our Vision

To establish strong marketing channels to reach each & every part of the world.

Our Values

Quality Product
Team Work
Accountability
Shortest Delivery Time
Competitive Price
Integrity
**APPLICATION**

The JEC Axial Flow pump is unmatched in the industry for high volume / Low head pumping requirements, especially when corrosive and/or abrasive solutions are involved. Mainly used in the following application:
- Evaporator and Crystallizer Circulation
- Phosphate, Soda Ash, Potash and Sodium Chloride Processing
- Polypropylene Reactors, Xylene application
- Black Liquor Evaporator, Chlorine Dioxide Generators
- Sewage Digesters
- Raw Water pumping, Flood control, Marine Ballast transfer

**DESIGN**

The Axial Flow pump generates flow by the thrust or lift action of rotating axial vanes of the impeller. The pump has an elbow that directs the flow through the suction and out the discharge end of the pump. It can be used in the top or end suction configuration depending upon the need and Flange dimensions, bolt circle and holes comply with ANSI B16.5, 150#. The back pull out design (up to 14" size) allows for easy maintenance and repair as the rotating element may be removed without disturbing the pipe work. Pump has wear rings as standard and lifting eye on bearing bracket.

**OPERATING DATA**

<table>
<thead>
<tr>
<th>Pump size</th>
<th>5 inch to 36 inch (DN 125 to 900)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow up to</td>
<td>20,000 m³/hr</td>
</tr>
<tr>
<td>Head up to</td>
<td>9 meter</td>
</tr>
<tr>
<td>Temperature up to</td>
<td>300°C</td>
</tr>
<tr>
<td>Max. working Pressure</td>
<td>10 Bar</td>
</tr>
</tbody>
</table>

**FAMILY CURVE**

![Family Curve Graph](image)
**APPLICATIONS**

**RANGE**
- **Delivery Size**: up to 200 mm (8” Inch)
- **Capacity**: up to 410 M³/Hr.
- **Head**: up to 150 Meter
  Working Pressure 17 kg/Cm²

**CONSTRUCTIONAL FEATURES**
Pumps are as per ANSI B73-1M The design is of back pull out type. Large varieties to models are available to operate at 1450 RPM and 2900 RPM at 50 Hz & 1750 RPM and 3500 RPM at 60 Hz. ANSI series chemical process pump is a horizontal single stage centrifugal pump.

**MODULAR INTERCHANGEABILITY**

**HYDRAULIC COVERAGE**
APPLICATION

The PCF centrifugal pump is suitable for handling water, condensate, oil, some aggressive chemical products and other liquids mainly used in the following applications:

- Water supply
- Irrigation
- Air conditioning
- Fire fighting
- Drainage
- Heating
- Chemical and petrochemical
- Sugar and alcohol industry
- Boiler feed

- Auxiliary circuits in refineries
- Auxiliary circuits in industry
  (Paper, Food, Synthetic Fibers, Others.)

DESIGN

Horizontal, single stage, end suction centrifugal pump dimensionally built to ISO 2858 and technical specification DIN 24256 / ISO 2858. The back pull out design allows for easy maintenance and repair as the rotating element may be removed without disturbing the pipe work.

Pump has wear rings as standard and lifting eye on bearing bracket.

OPERATING DATA

<table>
<thead>
<tr>
<th></th>
<th>50 Hz</th>
<th>60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivery size</td>
<td>32 mm to 150 mm</td>
<td>32 mm to 150 mm</td>
</tr>
<tr>
<td>Flow</td>
<td>540 m³/hr</td>
<td>630 m³/hr</td>
</tr>
<tr>
<td>Head</td>
<td>up to 160 m</td>
<td>up to 160 m</td>
</tr>
<tr>
<td>Temperature</td>
<td>up to 160 °C</td>
<td>up to 160 °C</td>
</tr>
<tr>
<td>Speed</td>
<td>up to 2900 rpm</td>
<td>up to 3500 rpm</td>
</tr>
</tbody>
</table>

SELECTION CHART - 1450 RPM

SELECTION CHART - 2900 RPM
APPLICATION
To support core markets which are Oil and Gas, Textile, Chemical, Paper and Sugar, Plastic, Pharmaceutical & Food, Plywood, Rubber, Water, and Industrial Applications.

The JEC Pump is a horizontal volute casing, single stage centrifugal pump, is manufactured in accordance with DIN 24256 (ISO 2858) standard. Designed for thermic fluids and hot water process conditions, Sturdy discharge cover designed for high stiffness, Optimised heat barrier & low wear. Design variant with bearing for high resistance. Reinforced deep-groove ball bearing with special grease fill for long service life, optimised shaft contour ensures reliable removal of leakage, Highly effective venting contour ensures optimum venting, Confines gaskets. Design variant with mechanical seal in tandem arrangement. Anti-seize plain bearing lubricated by the fluid handled, Optimised hydraulic system yields high efficiency. Impeller trimmed to match the specified duty point, Suitable for variable-speed operation and equipped with motor standard, Easy to maintenance for it’s back-pull-out design which allows the pump to be dismantled without disturbing the suction and discharge pipework, Ideal for thermal fluids at 350°C high temperature without needing any type of external air conditioning!

<table>
<thead>
<tr>
<th>SPECIFICATIONS</th>
<th>THERMAL FLUID</th>
<th>HOT WATER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Flow Rate</td>
<td>10 to 750 m³/h</td>
<td>10 to 750 m³/h</td>
</tr>
<tr>
<td>Max. Head</td>
<td>8 to 110 meters</td>
<td>8 to 110 meters</td>
</tr>
<tr>
<td>Fluid Temperature</td>
<td>350°C</td>
<td>80°C to 180°C</td>
</tr>
<tr>
<td>Max. Operating Pressure</td>
<td>16 bar</td>
<td>16 bar</td>
</tr>
<tr>
<td>Speed</td>
<td>1450 to 2900 RPM</td>
<td>1450 to 2900 RPM</td>
</tr>
</tbody>
</table>

FLOW CHART
FEATURES

- Semi-open type impeller design to handle slimes with solids
- Side Suction & Top Discharge connection
- Least Leakage due to gland portion on suction side
- Harden & Grind Shaft gives longer life
- Heavy duty Oil lubricated bearing housing
- Available in All CI, CI/SS, and SS-316 moc

APPLICATION

- Ideal for Filter Press applications in Dyes, Intermediates, Scrubber and Spray Dryer Application.
- Chemicals, Textiles, Ceramics etc. industries
- Oil & Petrochemicals Industries
- Effluent Treatment Plants
- Transferring, Loading, Unloading of Chemicals, Light Petroleum Products etc.

TECHNICAL SPECIFICATION

<table>
<thead>
<tr>
<th>Model</th>
<th>Size</th>
<th>Ele. Motor HP / kW</th>
<th>Pump Speed RPM</th>
<th>Discharge Head Kg/Cm²</th>
<th>Capacity in Liters / Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>FP-0</td>
<td>25 x 25 mm</td>
<td>1.0/0.75</td>
<td>2900</td>
<td>1.5</td>
<td>3000</td>
</tr>
<tr>
<td>FP-1</td>
<td>25 x 25 mm</td>
<td>2.0/1.5</td>
<td>2900</td>
<td>2.0</td>
<td>4500</td>
</tr>
<tr>
<td>FP-2</td>
<td>40 x 40 mm</td>
<td>3.0/2.2</td>
<td>2900</td>
<td>2.5</td>
<td>10000</td>
</tr>
<tr>
<td>FP-3</td>
<td>50 x 50 mm</td>
<td>5.0/3.7</td>
<td>2900</td>
<td>3.8</td>
<td>8000</td>
</tr>
<tr>
<td>FP-4</td>
<td>50 x 50 mm</td>
<td>3.0/2.2</td>
<td>1450</td>
<td>1.4</td>
<td>8000</td>
</tr>
<tr>
<td>FP-4B</td>
<td>50 x 65 mm</td>
<td>10/7.5</td>
<td>2800</td>
<td>5</td>
<td>10000</td>
</tr>
<tr>
<td>FP-5</td>
<td>65 x 50 mm</td>
<td>15/11</td>
<td>2800</td>
<td>7.5</td>
<td>14000</td>
</tr>
<tr>
<td>FP-5B</td>
<td>65 x 50 mm</td>
<td>5/3.7</td>
<td>1450</td>
<td>2.4</td>
<td>9000</td>
</tr>
</tbody>
</table>
APPLICATIONS

- Transferring of Concentrated HCL From Road Tankers.
- Filter Press for Dyes & Chemical.
- Effluent Treatment.
- Water Treatment Plants.
- Pickling in Steel Rolling Mills.
- Scrubbing of Corrosive Gases like Cl₂, Br₂, F₂, So₂, So₃, Co₂, Nh₃.
- Electro-Plating.
- Descalin

INDUSTRIES WHERE USED

- Dyes and Chemicals.
- Drugs & Pharmaceuticals.
- Caustic Soda Plants.
- Thermal and Atomic Power Plants.
- Fertilizer Plants.
- Copper, Zinc, Smelter.
- Steel Plants.
- TiO₂ Plants.
- Rayon and Staple Fibre Plant (Bleach Liquor)
- Paper & Pulp Industries.
Pinch valve is a Seat-less & Glandless valve.

Pinch valve is a modified version of laboratory pinchcock. A rubber sleeve is protected under a body made from cast iron, aluminum casting. The service material / fluid passing through does not come in contact with either body covering or any other metal parts of the valve except the rubber sleeve / muff and hence the body and other metal parts are almost permanently not subjected to the corrosive action of the fluid. The flow through the valve is straight and full as that of a pipeline, when the valve is fully open. Further, the collar of the sleeve eliminates use of any gasket. The valve having simple rising spindle type operation makes the valve just simple as other wheel operated valve. The in-between stoppage will allow the desired throttling and Pinch valve thus offers positive control over flowing media.

**FEATURES**
- Seat-less & glandless valves
- Field replaceable elastomer sleeve / muff
- Rubber sleeve / muff has four reinforced lugs
- Flanged ends & drilled to DIN, ANSI, BS - 10, IS, etc.
- This valve incorporates all design modification based on our experience & is of sturdy construction & good quality finishing to handle abrasive and corrosive.

**APPLICATION**
Pinch valve finds its best application in handling corrosive slurry, abrasive media, liquid with solid suspensions and many others, which are difficult to handle with seat valve. Pinch valves are also best suited for Vacuum service.

**RUBBER SLEEVE (MUFF)**
Available in Reinforced Natural, Neoprene, Silicon, SBR, Hypalon, Butyl, EPDM etc.

**FLANGE DRILLING**
As per DIN, ANSI, BS-10 etc.

**RANGE**
The flange of the pinch valve can be supplied in accordance to BS, DIN, ASA & IS dimensions. The range for the valve is from 15 mm to 300 mm. Higher size range can also be developed on request.

**MODE OF OPERATION**
Knife Gate Valve
Smart Solution for Harsh Application

1. Available Sizes 3”-36”
2. Abrasion-Resistant Slurry Sleeves are Field Replaceable, Provide Bi-directional, Drop-Tight Shut-off and Eliminate the Need for Packing
3. 100% Full-Port Design
4. Heavy-duty 316L Stainless Steel Get
5. Wiper Blade Cleans debris from Gate as it strokes
6. Open/Close Lock-Out feature (optional)
7. Robust Corrosion-Resistant ductile iron yoke
8. Slotted Flange Holes for Easy through Bolt installation
9. Grease Fittings for Gate and Stem Lubrication

APPLICATIONS
- Powder handling in silos
- Pulp and Paper Plants
- Slurry Handling (Chemical Plant & Process Industries)
- Water and Sewage Applications
- Pneumatic Conveying Systems
- High temperature services
- Mining & Power Plants

MATERIAL OF CONSTRUCTION

Body: Made up of one piece solid, rugged and heavy duty casting with flanges. Standard is Ductile Iron. SS 304, SS 316, SS 316L, Alloy 20, CD4MCu available on request.

Knife Gate: High tensile metal sheet SS 316L as standard. Alloy 20, Hastalloy etc available upon request.

Seat / Sleeve: Available in all materials as per requirement of application. Natural Rubber, Neoprene, EPDM, Viton, Hypalon etc.

Packing: Smooth well machined packing chamber to provide uniform compression of packing and gives zero leakage. PTFE/high temperature graphite asbestos, food grade packing etc available as per application requirement.

Hand Wheel: Cast Iron, epoxy painted.

When open, the KGV Valve’s reinforced elastomer sleeves seal against each other and provide a 100% full-port opening which minimizes turbulence and wear. In this open position, the seats isolate and protect all metal parts of the valve from coming in contact with the process. When closed, the sleeves provide a drop-tight seal in both directions.

SUPERIOR SLEEVE DESIGN

JEC valve seat is made up of two highly resistant, long lasting sleeves made up of natural rubber with metallic core. It's well studied and patented hollow design allows for maximum flexibility on passing through the gate, minimizing the effort necessary for its operation.

The two sleeves are in permanent contact with each other so that there is total flow. Considering that the knife gate valve is specially designed to work with abrasive slurries, this design of sealing provides constant protection the body because the working media is not in direct contact with the body.

For easy maintenance the sleeves can be fully replaced from the outside of the valve as a complete unit and no need of flange rubber gaskets to make tightness between the valve and flanges.
Gate Valve

JEC Gate Valves are Outside Screw, Rising Stem, Bolted Bonnet Construction, Threads are away from the line fluid and easy to lubricate.

Gate Valve
- OS & Y Type, Rising Stem, Bolted Bonnet
- Design Standard: API 600
- Size Range: 1" to 12"
- Pressure Rating: 125# / 150# / 300#
- End Connection: Flanged End

Forged Steel Gate Valve
- OS & Y Type, Rising Stem, Bolted Bonnet
- Design Standard: API 602
- Pressure Rating: 800# / 1500#
- End Connection: Screwed / Socket Weld / Butt Weld End

MATERIAL OF CONSTRUCTION

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cast Iron</td>
<td>IS 210 Gr FG 200</td>
</tr>
<tr>
<td>Cast Carbon Steel</td>
<td>ASTM A 216 Gr WCB</td>
</tr>
<tr>
<td>Cast Stainless Steel</td>
<td>ASTM A 351 Gr CF 8/CF 8M</td>
</tr>
<tr>
<td>Forged Carbon Steel</td>
<td>ASTM A 105</td>
</tr>
<tr>
<td>Forged Stainless Steel</td>
<td>ASTM A 182 Gr F304 / F316</td>
</tr>
<tr>
<td>End Connection</td>
<td>Screwed AS PER BSPP/BSP/NPT</td>
</tr>
<tr>
<td>Socketweld</td>
<td>AS PER ANSI B 16.11</td>
</tr>
<tr>
<td>Flanged</td>
<td>AS PER ANSI B 16.5</td>
</tr>
<tr>
<td>Pressure Rating</td>
<td>ASA 125#, 150#, 300#, 500#, 800#</td>
</tr>
<tr>
<td>Engineering Option</td>
<td>Gear Operated, Electrical Actuated,</td>
</tr>
<tr>
<td>Size Range</td>
<td>15 mm to 300 mm</td>
</tr>
</tbody>
</table>
GLOBAL PRESENCE

JAY AMBE ENGINEERING CO.
MANUFACTURER OF INDUSTRIAL CHEMICAL PROCESS PUMPS & VALVES

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