



**ALPHA HELICAL PUMPS**



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*precision passion*

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## Born to Excel

Alpha Helical Pumps is a single source for various pump types serving many different industries around the world. Specializing in helical, twin screw and centrifugal technologies. Our products support a wide range of industries, from Oil & Gas and Sewage to a broad range of industrial applications. For nearly 20 years, Alpha has remained a pioneering pump solutions provider by focusing on customer needs for precision performance around the world with a portfolio of pump products, deep expertise in critical applications, strong global reach and a company-wide commitment to excellence.

## Worldwide

Wherever you are, Alpha is near to serve you. Our manufacturing facility is located at Coimbatore, South India with worldwide reach through a network of sales / service offices throughout India, Saudi Arabia and Australia and affiliates in the rest of the world.

## Alpha Quality

We are an ISO 9001:2008 certified company and guarantee full customer satisfaction through our design Upgradation System that works as a catalyst for continuous improvement, which means our pumps will exceed your expectations and work reliably and continuously with little need for maintenance.

## Deep Expertise

Alpha listens closely to varied customer needs and accordingly design and develop pump to meet the exact criteria. Our expertise combined with the experience from working for a broad variety of industries on a global scale enables us to provide customers with the best pumping solutions in the market. In fact, Alpha's groundbreaking work for pump applications is based not only on a highly efficient R&D, but also deep understanding of many industry settings.



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Your **application.**  
Our **solution.**

Alpha has a wide portfolio designed to meet the demands of a broad spectrum of installed environments. We ensure that we create the highest precision pumps available by investing in design and production methods while constantly updating employee knowhow. No wonder Alpha has one of the best engineering skills in the pump industry to meet varying and specialized solutions for almost any application.

### **Paper, Pulp, Sugar & Chemical**

Think paper production, think Alpha progressing cavity pumps. Such is the compatibility for high quality conveyance of media in paper manufacturing. Alpha transports the media gently under low pulsation for paper, pulp, sugar and chemical industries.

### **Food & Pharmaceutical**

Most food and pharmaceutical production are very precise and unforgiving processes, considering the necessity to keep temperatures and flow rates of media at high regulated conditions. Alpha's engineering expertise with precision pumps allows us to meet customer needs on every level.

### **Oil & Gas**

Alpha Pumps have a longstanding reputation for supporting the petroleum industry. Our progressing cavity pumps provide continuous, pressure-stable, low pulsation conveyance and are dependable low-maintenance workhorses reliable year after year.

### **Energy & Environmental**

Dosing in proportion of speed, along with gentle, stable conveyance are indispensable in power generation and waste water treatment. Whether it is effluent and sewage treatment or power generation. Alpha Pumps make it a easy, economical, environmental friendly process for you.

### **Emptying & Dosing**

From making possible near perfect residue-free emptying with its barrel emptying pumps to state-of-the-art dosing through other pumps that gently handle even highly abrasive, viscous and filled products. Alpha is a clear champion in the emptying and dosing requirements for a broad range of industries.



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## 'BD / BH' SERIES INDUSTRIAL PUMPS

**Description:** BD' series single screw pumps are of cast iron construction with alloy steel / stainless rotating parts. Whilst the 'BH' series pumps are of complete stainless steel constructions. Rotor and stator material combinations are available for the pumping of highly abrasive or corrosive fluid. BD/BH series have ISO suction and delivery connection BS/DIN or other equivalent connections are also provided to suit specific requirements.

### Salient Features

- Good self priming properties even with air or gas inclusion in the liquid upto 8.5 MWC.
- Handles solids in suspension or mixture containing high percentage of solids.
- Steady and smooth flow with little pulsation makes it suitable for dosing and metering duties.
- Direction of the flow through the pump is reversible by merely changing direction of rotation of the prime mover.
- Gate and check valves are not necessary.
- The pressure head is independent of speed and capacity is proportional to speed.
- The metal bonded high precision moulded stator ensures high efficiency, pressure and increased life.

Capacity	: 200 m <sup>3</sup> / hr.
Pressure	: 36 Bar
Temperature	: 200°C
Viscosity	: 100,000 cSt

## 'MOD / MOH' SERIES INDUSTRIAL PUMPS

**Description:** 'MOD' series single screw pumps are of cast iron construction fitted with alloy steel / stainless steel rotating parts, while 'MOH' series have parts in contact with the fluid in stainless steel. Shaft sealing is ensured by hygienic quality gland packing or mechanical seal. An integral motor base eliminates the requirement of a baseplate, motor placed just above the bearing housing and driven by V-pulleys thereby reducing the space requirement drastically.

Capacity	: 60 m <sup>3</sup> / hr.
Pressure	: 6 Bar
Temperature	: 200°C
Viscosity	: 100,000 cSt



### Salient Features

- High Suction Capability-Low NPSH (R) Can also work against high vacuum conditions.
- Solids handling capability. Progressive cavity pumping enables handling high percentage of solids in suspension.
- Low internal velocity reduces wear due to erosion.
- Metering capability in inherent capacity is approximately proportional to pump speed and free of pulsation.
- Integral Motor base. Eliminates usage of baseplate resulting in lower space requirement.
- Air / Gas handling capability. Due to positive action, inherently self-priming. Suction & delivery ends can be interchanged.
- By merely changing direction of rotation of the prime mover. Gentle handling of shear sensitive products.
- Easy operation and maintenance. Single rotation element, no valves or gearing with single gland.
- Wide choice of stator materials to suit liquid being pumped.



## 'BC' SERIES HYGIENIC PUMPS

**Description:** 'BC' series single screw pumps are designed specially for hygienic application. All metallic parts in contact with the fluid are in smooth finish stainless steel, and stator in of non-contaminating food grade elastomer viz. Nitrile, EPDM, Silicon and Viton. Shaft sealing is ensured by hygienic quality gland packing or mechanical seal. These pumps are available in IDF / SMS or equivalent suction and discharge connection.

### Salient Features

- All metallic part coming in contact with the fluid are in smooth finish stainless steel.
- Stator used is non-contaminating polymer.
- All internal contours are designed to be swept by the product flow or by detergent when 'in-line' cleaning.
- Chemical or bacteriological contamination avoided by the elimination of product retaining pockets.
- Can work against high vacuum and ideal for lifting viscous fluids from the vacuum pan.
- Capacity varied by simple variation of pump speed to match system parameters.

Capacity	: 100 m <sup>3</sup> / hr.
Pressure	: 36 Bar
Temperature	: 200°C
Viscosity	: 100,000 cSt



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### 'BW' SERIES WIDE THROAT PUMPS

**Description:** 'BW' series single screw pumps are constructed with cast iron bearing housing. MS Hopper with alloy steel rotating parts. For Corrosive & hygienic applications the pumps are in complete SS construction. The hopper type suction inlet allows gravity flow of plastico-viscous materials on to the augur cum coupling rod which pushes the substance into the pumping cavity. Product retaining pockets are completely avoided eliminating bacteriological contamination.

#### Salient Features

- Suitable for all media up to most thick pulpy consistency with high contents of solids or fibrous material
- Open hopper type inlet with force feed screw upstream of rotor and stator.
- Torsion-free metal-bonded stator for increased stator life and higher efficiency per stage pressure.
- Pulsation, turbulence or aeration free metered flow proportional to the speed
- Capable of developing up to 24 Bar even at low pump speed.
- Easy and quick maintenance, which does not require any special tools & temperature range from - 40°C to +200°C
- Low internal velocity of the fluid minimizes wear and tear due to erosion.

Capacity : 150 m<sup>3</sup> / hr.  
 Pressure : 24 Bar  
 Temperature : 200°C  
 Viscosity : 1,000,000 CST

### 'BW-BB' SERIES BRIDGE BREAKER PUMPS

**Description:** 'BW-BB' single screw pumps are wide throat pumps integrated with a 'bridge breaker' assembly to overcome bridge formation. Any fluid having a tendency to stick together to form lumps can form bridges between the wells of the suction entry of the pump, thus ceasing further flow of fluid. For non corrosive application, MS fabricated bucket with alloy steel rotating parts is used. For corrosive or hygienic, Stainless steel is used.



Capacity : 40 m<sup>3</sup> / hr .  
 Pressure : 24 Bar  
 Temperature : 200°C  
 Viscosity : 1,000,000 CST



### 'AB' SERIES VERTICAL PUMPS

**Description:** 'AB' series single screw pumps are compact and sleek design vertical pumps driven by flange mounted prime mover for emptying barrels. Various options in joints such as double sealed bush/pin, open bush/pin, etc., are available. Delivery opening with flange. IDF or suitable connections are available. MS/SS/PVC material of construction with internal rotating parts to suit any condition. Shaft sealing is done by soft gland packing / mechanical seal.

#### Salient Features

- Suitable for all media of aqueous to extremely viscous consistency, also with solid or fibrous substances.
- Driven by electric motors : three phase a.c. motors, geared motor - also with explosion proof enclosure.
- Constant or variable delivery, therefore also suitable for dispensing.
- Construction in steel, special steel or plastic.
- Temperature range up to about 150°C.
- Simple Construction, Easy to use & Gentle treatment of the medium.

Capacity : 100 m<sup>3</sup> / hr  
 Pressure : 24 Bar  
 Temperature : 100°C  
 Viscosity : 1,000,000 CST



### 'VB' SERIES VERTICAL PUMPS

**Description:** 'VB' single screw pumps are intended for difficult applications like extracting oil from bore holes or other media from tanks. Made to ensure lucid flow of fluids, the VB series pumps are designed and manufactured to be tough with very rigid and strong joints.

#### Salient Features

- Capital costs are of the order of 50-25% of those of conventional units, depending on size, because of simplicity and small size of the drive head.
- Sand is handled effectively thanks to resilience of the stator material and the pumping mechanism.
- Limited overall ground space makes perfectly suitable for multi-well location.
- Low profile of driving system contrasts with monumental beam units.
- Low noise with low visual impact.
- Specific rotor geometry minimizes abrasion, increases lifetime.
- Constant stress on rod string with minimal stress fluctuation decreases the risk of fatigue failure.

Capacity : 260 m<sup>3</sup> / hr .  
 Pressure : 48 Bar  
 Temperature : 200°C  
 Viscosity : 1,000,000 CST





## 'APP' SERIES CENTRIFUGAL PROCESS PUMPS

**Description :** Alpha 'App range heavy duty chemical process pump is a horizontal, single stage, centrifugal pump. The complete pump barring the volute casing can be withdrawn the motor end without disturbing the suction or delivery pipeline.

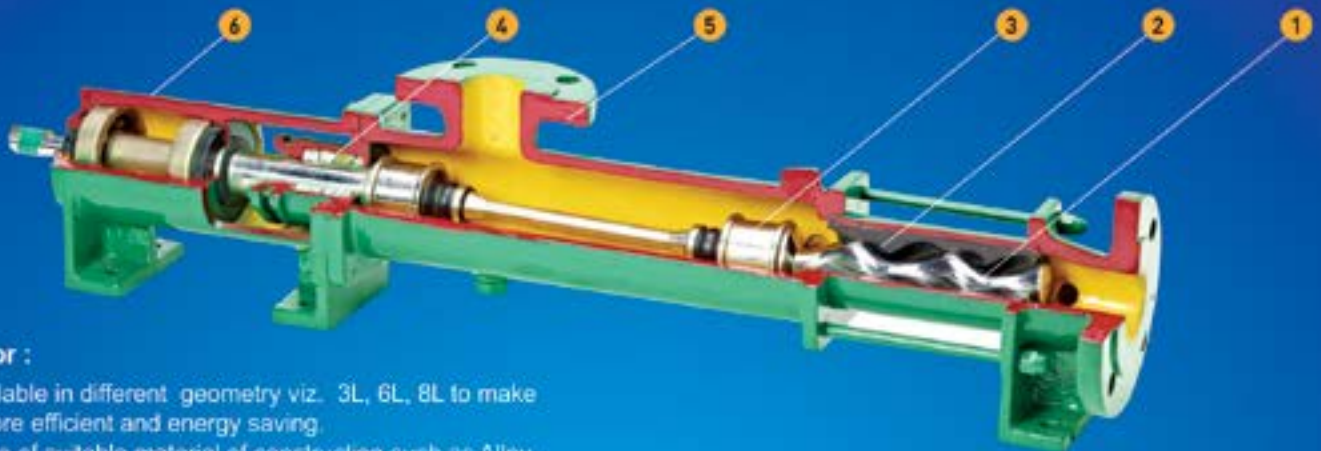
### Operating Range :

Speed : 1450 RPM, Capacity : 400 M<sup>3</sup>/Hr Head : 60m  
 Speed : 2900 RPM, Capacity : 400 M<sup>3</sup>/Hr Head : 150m

### Working Pressure :

Grey Cast Iron : 16 Kg/Cm<sup>2</sup> max.  
 SG Iron, Cast Steel : 25 Kg/Cm<sup>2</sup> max.  
 Stainless Steel, Alloy 20

**Engineering Excellence** in Every Aspect



#### 1 Rotor :

Available in different geometry viz. 3L, 6L, 8L to make it more efficient and energy saving.  
 Made of suitable material of construction such as Alloy Steel, Tool Steel, SS 304, SS 316, Hastelloy, Monel etc.,

#### 2 Stator

improved design to facilitate easy entry of the liquid and long life.  
 For temp application split type Stators are provided.  
 Available in different elastomer such as Nitrile, Neoprene, EPDM, Silicon, NCR, Hypalon, Viton etc,

#### 3 Drive Joints :

Option to select Cardon Joints, Geartype Joints, Pin & Bush & Double Bush & Pin Joints.  
 Joints are made of open type or concealed type or concealed type depending on the application.

#### 4 Shaft Seals :

Mechanical seal or Packed glands are available in Shaft sealing.  
 Easy to access housing facilitate comfortable fitting of seal and can be replaced without removing the Shaft.

#### 5 Suction & Pressure housing :

Designed to convey fluids with minimum NPSHR for efficient running.  
 inspection windows are provided for easy access to the joints.

#### 6 Block Construction Design :

Modular design to accommodate maximum sizes with minimum frames enables keeping minimum inventory.



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**'BD / BH' SERIES INDUSTRIAL PUMPS**

**User Industries :** Oil & Petro Chemical, Effluent, Brewery, Ceramics, Chemical, Construction, Cosmetic, detergent, detergent, edible oil, fertilizer, marine, mining, paper, paint, sewage, sugar, textiles, etc.,

**Fluids Handled :** Oil Sludge, Effluent Sludge Acids, Acrylic Emulsion, Ceramic, Chemical Slurries, Emulsion, Paints, Magma, Molasses, Oil Printing Ink, Solvents, Vegetable Oil, Viscose, Yeast Etc.

**'MOD / MOH' SERIES INDUSTRIAL PUMPS :**

**User Industries :** Coal mines, Construction, Cosmetics, Detergent, Distillery, Dyestuff, Effluents, Edible Oil, Fertilizer, Marine, Paper, Paints, Printing ink, etc.,

**Fluids Handled :** Acids or alkaline, Ceramic slurry, Chemical slurry, Cosmetics, Distillery, Dyestuff, magma, molasses, Oil, paint, printing ink, etc.,

**'BC' SERIES HYGIENIC PUMPS :**

**User Industries :** Bakery, Brewery, Confectionery, Cosmetics, Dairy, Edible Oil, Food processing, Fruit Processing, Ice Cream, Malt & Cocoa, Pharmaceuticals, Winery, etc.,

**Fluids Handled :** Apple pulp, beer, beverages, butter oil, cream, curd, edible gelatine, fruit juice, fruit pump, glucose, jam, medical formulation, yeast, yoghurt, etc.,

**'BW' SERIES WIDE THROAT PUMPS :**

**User Industries :** Brewery, bakery, confectionery, dairy, dyestuff, explosives, edible oil, food processing, malt & coca, meat processing, paper & pulp, paint & varnish, soap & detergent, sugar, starch, etc.,

**Fluids Handled :** Asbestos slurry, Butter, Cake mix, 'Chyawanprash', Clay slurry, Explosives slurry, Fruit or Vegetable mash, Lecetin, Putty, Starch slurry, Yoghurt etc.,

**'BW - BB' SERIES BRIDGE BREAKER PUMPS :**

**User Industries :** Bakeries, Breweries, Confectionery, Chemicals, Food Processing, Fruit Processing, Meat Processing, Starch Etc.

**Fluids Handled :** Cake mix, Dough, Cheese, Mash, Paper Pulp, Grout with gravel.

**'AB' SERIES VERTICAL PUMPS :**

**User Industries :** Brewery, Automobile, Chemicals, Food Processing, Malts & Cocoa, Paints & Dyes, Pharmaceuticals, etc.,

**Fluids Handled :** Beer, Fruit Pulp, Hot Chocolate, Liquid Soap, Grease, Putty, Glucose, Drug Formulations, Syrup, Lubricating Oil, Furnace Oil, Paint etc.

**ALPHA CENTRIFUGAL PUMPS :**

**User Industries :** Agriculture, Brewery and distillers, Ceramics and refractory, Cattle feed, Chemical and process, Construction, Cosmetics and toiletries, Edible oil, Effluent treatment, Electronics, Explosive, Fertilizer, Fisheries, Man-made fibres, Marine, Malt and Cocoa, Mining, Oil exploration, Paint and Varnish, Palm Oil, Paper pulp and cellulose, petrochemical and Refinery, Printing ink, Rubber, Sewage treatment, Soap and detergent, Starch, Steel, Sugar, Textiles, Waste water treatment etc.,

**Fluids Handled :** Acidic and alkaline slurry, Alum, Bentonite slurry, Black liquor, Casein slurry, Ceramic slurry, Coating mix, Detergent slurry, De-watered sludge, Digested sewage sludge, Electroplating solution, Emulsion, Ferrite slurry, Flocculant Glue, Grout mix, Gum sludge, Industrial wastes, Latex, Lube oil, Magma, Masecuite, Molasses, Oil sludge, paint, Paper pulp, Petroleum jelly, Poly electrolytes, Printing ink, Resins, Soap stock, Sodium silicate, Spent wash, Sulphite sugar juice, Varnish vegetable oil, Viscose, Water to thickened sludge, Yeast etc.,



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