VERTICAL CANTILEVER PUMPS

For pumping hot, corrosive, abrasive, volatile and explosive liquids and wastes.

www.haywardgordon.com
INTRODUCTION

Vertical cantilever shaft pumps from Hayward Gordon offer the advantages of exceptionally low maintenance and robust operation in difficult conditions. The cantilever design completely eliminates the down-time and expense related to the maintenance of submerged seals, bearings and suction check valves. This also eliminates the need for flushing and lubrication systems.

No damage will result from dry operation and the pump will automatically re-prime when the liquid covers the volute.

APPLICATIONS

The wet-end and material options from Hayward Gordon make our design particularly well suited for demanding sump applications including those that require pumping of large solids, abrasive slurries, and corrosive or hazardous liquids. Some examples are listed below.

- **Power Generation**
  - Coal Storage Runoff
  - Fly Ash & Slag
  - Neutralization Sumps
  - Standby Cooling

- **Waste Treatment**
  - Sand & Grit Removal
  - Sludge Handling
  - Lime/Alum Sludges
  - Ferric Chloride

- **Mining**
  - Dewatering
  - Crusher Spraydown
  - Tailings Ponds
  - Filter Backwash
  - Electrolytes

- **Steel Making**
  - Gas Scrubber Slurries
  - Mill Scale Slurries
  - Pickle Liquor
  - Plating Solutions

- **Pulp & Paper**
  - Bark Washing
  - Wood Chips
  - Lime/Caustic Slurries
  - Black/Green Liquor
  - Screen/Stock Rejects
  - Bentonite slurries
  - Paper Stock

- **Food & Beverage**
  - Brewing Products
  - Sugar Slurries
  - Corn Syrup & Juices
  - Waste Sludges
  - Caustic
  - Produce Washings

- **Chemical Process**
  - Abrasive/Corrosive Slurries
  - Glass Fibre
  - Rubber Crumb
  - Acids

WET-END OPTIONS

Hayward Gordon offers a choice of four wet-ends to address a wide range of services.

- The Torus recessed impeller design handles large solids (up to 8” diameter) and/or highly abrasive material. For abrasive services, this pump features abrasion resistant materials of construction and a replaceable wear element that protects the casing.

- The ANSI process pump wet-end offers high efficiency on fluids with little or no solids. A wide range of alloys is available for acids and other corrosive liquids.

- The Slurry design offers high efficiency pumping of abrasive slurries. This pump offers hard metal construction plus front and back wear plates to stand up to the most demanding applications. The splitter-type double volute minimises radial shaft loading and provides for smooth operation in deep sumps.

- The CHOPX chopper pump for solids handling requiring combined chopping and pumping.
Adjustable Impeller Clearance
Impeller clearance can be externally adjusted easily via shims and jacking screws.

Heavy Duty Bearings
Grease lubricated radial and thrust bearings are safely located above the pumped fluid. In extremely severe environments, the bearing housing can be pressurised to positively seal against contamination.

Optional Vapour Seal

Direct or V-Belt Drive
Both drive options are available in order to ensure that special operating conditions or low headroom requirements can be met.

Non-Contacting Labyrinth Seals
Hayward Gordon labyrinth seals, standard on all cantilever pumps, are virtually maintenance-free since they do not rub against any other parts. Standard lip seals contact the rotating shaft causing wear on both the seal and shaft. Replacement of a traditional lip seal can require removal and disassembly of the entire pump.

Cantilever Shaft
Every pump and application is checked against well proven, standardised design parameters to ensure that the shaft operates safely below its first critical speed. Shaft diameters up to 7" are available.

Standard Pump Settings
Provides greater parts interchangeability and faster deliveries.

Optional Suction Tailpipe and Strainer

Optional Wet-Ends
- Recessed Impeller
- ANSI Process
- Slurry
- Chopper

Optional Agitator
Prevents sanding-in from the settling of slurry material. The turbulence created by the agitator puts solids back into suspension so that they can be drawn into the pump.
Performance Range

For capacities to 1000 m³/hr (4,400 US GPM) and heads to 46 m (150 ft.) standard models are available. Beyond this range, special designs may be offered.

Material Specification

Wet-ends of cast machineable and non-machineable alloys. Remainder of parts in the nearest machineable wrought equivalent.

Classifications

- Corrosion Resistance
- Combined Corrosion and Abrasion Resistance
- Abrasion Resistance

Cast Iron
316 Stainless Steel
316 ELC SS
Alloy 20
Hastelloy C

CD4MCu
28% Chrome Iron

Ni-Hard
Super Ni-Hard
28% Chrome Iron
Harden Steel