MIXING PUMPS

Hayward Gordon is a leader in manufacturing centrifugal pumps serving both municipal and industrial markets. Hayward Gordon's access to multiple types of centrifugal pumps allows us to customize the HYDROMIX system to suit our client's specific applications.

CHOPX Chopper Pump

The CHOPX pump has the capability of cutting/conditioning large solids combined with an efficient pumping action. This makes the CHOPX pump ideally suited for applications with large solids and preventing blockages downstream.

XCS Screw Centrifugal Pump

The XCS pump combines the action of a positive displacement screw and a single vane centrifugal impeller. The XCS pump offers a unique set of advantages for handling thick sludges, large or stringy solids and the ability to handle rags or other fibrous materials without plugging.

XR Torus Recessed Impeller Pump

The XR pump uses a recessed impeller design to create a vortex in front of the impeller. The vortex ensures that ~80% of solids present within the fluid are discharged without coming into contact with the impeller and rear section of the casing. This capability allows the XR pumps to excel at pumping highly abrasive slurries and ensuring pump longevity.

HYDROMIX APPLICATIONS

Water & Wastewater

- Anaerobic Digesters
- Sludge Storage Tanks
- Equalization Basins
- Anoxic Zones
- Therma Hydrolysis Tanks • Lime Slurry Tanks
- Water Storage Tanks

- Industrial
 - Pulp & Paper Black Liquor Tanks
 - Crude Oil Storage Tanks
 - Textile Waste Storage Tanks





WATER > PROCESS > INNOVATION





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HYDROMIX SYSTEM









HYDROMIX SYSTEM

INTRODUCTION

Hayward Gordon was founded in 1952 as a distributor of industrial process pumps. Since then the company has evolved into an international manufacturer of pumps, mixers and engineered systems. With over 60 years in the business of engineering, designing, manufacturing and distribution of pumps and mixers, Hayward Gordon offers effective solutions backed by solid experience.



HYDROMIX

Hayward Gordon completed the union between its pumping and mixing experience by developing the HYDROMIX. As a hydraulic mixing system, the HYDROMIX utilizes a Hayward Gordon solids handling pump to recirculate and discharge tank contents through nozzles strategically placed within the same tank. Energy discharged from the nozzle jets cause the tanks volume to turn and initiate a mixing scheme based on bulk flow movement.

HYDROMIX ADVANTAGE

- Blending times of 120 minutes or less
- Tank active volume greater 90%
- Solid suspension and flushing capability
- Foam & SCUM blanket suppression
- Minimal trouble-free maintenance and operation
- Zero rotating parts within the tank
- Energy efficient operation

CONSTRUCTION

HYDROMIX nozzle assemblies are built and manufactured in Canada. Nozzle assemblies are available in a dual or single nozzle configuration.

HYDROMIX nozzle assemblies are constructed from 304 or 316 stainless steel and undergo either nitriding or glass lining for abrasion and adhesion protection. Contact Hayward Gordon for custom material options.

HYDROMIX nozzles are cast and machined per the specific requirements of each individual project. All nozzles are designed with a minimum 1" wall thickness, enhancing their longevity and durability. All HYDROMIX nozzles come with a 10-year warranty.







MIXING REGIME

The HYDROMIX mixing pattern consists of both top to bottom and circular fluid motion to achieve and sustain optimal process conditions.

- Circular fluid motion aids in blending tank contents and developing environmental uniformity. It also aids in sweeping the tank floor and drafting solids to prevent mounding.
- HYDROMIX nozzles are aimed to use the tank walls as natural baffles. Jets impacting the walls help form a top to bottom fluid motion which aids in maintaining solids suspension.

COMPUTATIONAL FLUID DYNAMICS

Hayward Gordon has over 20 years of experience utilizing its in-house ANSYS CFD platforms to validate and guarantee mixing solutions for its clients in the wastewater treatment, mining, petroleum and chemical processing industries. Hayward Gordon is experienced in conducting both transient and steady state simulations to analyze the effectiveness of a mixing regime.

Hayward Gordon uses the following visual tools to analyze the performance of the mixing simulation:

- Velocity Contours
- Particle Streamlines
- Velocity Vectors
- ISO Surfaces
- Shear Planes

Hayward Gordon provides a CFD Simulation report for all HYDROMIX projects.

