



## Engineered Systems for the Oil & Gas Industry

**Hayward Gordon** is your single-source provider of custom engineered liquid and bulk solid metering and blending systems complete with certified instrumentation and controls plus ABSA certified piping. We offer systems for chemical and mineral feeding, metering, mixing, blending and dispersing.

From individual components to customized and/or turnkey systems, we have a broad range of innovative, durable and flexible offerings to suit your every application.

### **Experience:**

Hayward Gordon has been providing solutions to the Oil & Gas industry since 1952. Being a manufacturer and distributor has given us a unique knowledge in the application of a wide range of technologies. Our sales and applications engineering team works with each customer as a partner, providing a resource of innovative and cost effective solutions to pumping and mixing solutions.

### **Applications Engineering:**

Hayward Gordon applications engineers provide a valuable resource to our customers. Their goal is to match process problems with the best and most cost effective technology. We have industry specialists with over twenty years of direct experience in the application of process equipment. We can often provide information based on prior experience that is industry and application specific. We strive to provide clear technical information and informative proposals that are professional and complete.

### **Design Engineering:**

Hayward Gordon's engineering team is comprised of an accomplished group of mechanical, hydraulic, and manufacturing engineers. The latest computer aided design technology is employed including solid modeling and computer aided manufacturing (CAM).

### **OIL INDUSTRY – MINING & EXTRACTION**

- Wax Inhibitors
- Demulsifiers
- Methanol and Glycol
- Oxygen Scavengers
- Biocides
- Filter Aids
- Coagulants
- Scale Inhibitors
- Corrosion Inhibitors
- Amines to steam lines to prevent corrosion

### **OIL INDUSTRY - REFINING**

- Additives in the refining and blending stages
- Water treatment chemicals for water conditioning and distillation
- The control of corrosion by pH adjustment
- The injection of inhibitors and gasoline to fuel oils
- Anti-icing chemicals to fuels
- Boiler feed treatment

### **GAS INDUSTRY**

- Odorizing natural gas
- Methanol injection
- Butane or Propane injection
- Boiler feed treatment

### **PETROCHEMICAL & CHEMICAL INDUSTRY**

- Metering systems for all free flowing process chemicals
- Handling of liquefied gases (CO<sub>2</sub>)
- Metering of resins and catalyst
- Wetting and antifoam agents
- Controlled sampling of process liquids
- Boiler treatment
- Water treatment
- Effluent treatment, pH control

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# ENGINEERED SYSTEMS AND CONTROLS

ENGINEERED SYSTEMS	DESCRIPTION	FEATURES
<b>Custom Pump &amp; Process Packages</b> 	<p>Your single-source for the design and manufacture of custom engineered pumping systems. Based on process and application specifications, we will produce P&amp;ID's and design the system with necessary pumps, piping, controls and instrumentation. You will receive a skidded, tested and fully functional system complete with documentation that is tailored to your specific requirements.</p>	<ul style="list-style-type: none"> <li>• Optimal pump type selected for each application</li> <li>• Certified TSSA piping systems welded to ASME B31.1 and B31.3</li> <li>• CSA approved control panels</li> <li>• Optional PLC's and operator interfaces</li> <li>• Optional CRN registration of components</li> </ul>
<b>Tank &amp; Mixer Packages</b> 	<p>Hayward Gordon saves you time and money by integrating our in-house mixing expertise into complete turn-key packages that include Hayward Gordon mixers, tanks and various accessories designed to your specifications.</p>	<ul style="list-style-type: none"> <li>• Range of tank materials includes stainless steel, fiberglass, HDPE, steel, and rubber lined steel</li> <li>• Bridge supports</li> <li>• Level controls</li> </ul>
<b>Metering / Chemical Injection Systems</b> 	<p>Our custom engineered metering and chemical injection systems include pumps, components, controls, and instrumentation selected to suit the application and customer specifications.</p> <p>Typical applications include Alum, Chlorine, Hydrogen Peroxide, Ferric Chloride, Boiler and Cooling Water Additives, Polymers, Acids, Chelants, Phosphates, Dyes, Pigments, Starches, Coatings, and many other additives.</p>	<ul style="list-style-type: none"> <li>• Wide range of metering pumps including API 674 and 675</li> <li>• Piping and frames available in 316SS, steel, or PVC</li> <li>• Certified TSSA piping systems welded to ASME B31.1 and B31.3</li> <li>• CSA approved control panels</li> <li>• Optional PLC's and operator interfaces</li> </ul>
<b>Slurry Makedown &amp; Mineral Dispersion Systems</b> 	<p>Complete packaged systems for effective slurry makedown of bulk solids and difficult to wet materials.</p> <p>Typical applications include lime, gypsum, starch, talc, bentonite clay, calcined clay, and soda ash.</p>	<ul style="list-style-type: none"> <li>• Systems typically include; semi- bulk bag unloading station, overhead hoist, feed hopper with access hatch, dust seal, level monitoring, pneumatic vibrator, volumetric feeder with variable speed control, and mixing tank</li> <li>• Allen Bradley PLC and operator interface for automatic control and monitoring</li> </ul>
<b>Dry Polymer Systems</b> 	<p>The innovative <b>ChemVac™</b> dry polymer makedown system, features a unique "high performance / high pressure" nozzle, providing one of the most efficient wetting systems available. Allen Bradley PLC and operator interface used to provide automatic control and monitoring.</p>	<ul style="list-style-type: none"> <li>• Feed rates to 1,000 kg/day &gt; 1% concentrations Eliminate "fish-eyes"</li> <li>• Dust-free wetting</li> <li>• Stainless steel construction</li> <li>• CSA control panels</li> </ul>
<b>Liquid Polymer Systems</b> 	<p>The <b>Activator™</b> series of liquid polymer systems provide fast and complete inversion of polymer. Allen Bradley PLC and operator interface used to provide automatic control and monitoring.</p>	<ul style="list-style-type: none"> <li>• Dilution flows from 5 gpm to over 100 gpm</li> <li>• Unique "Smart-Mixer" and post dilution mixing</li> <li>• Stainless steel construction</li> <li>• CSA control panels</li> </ul>

Start-up service available on all systems



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