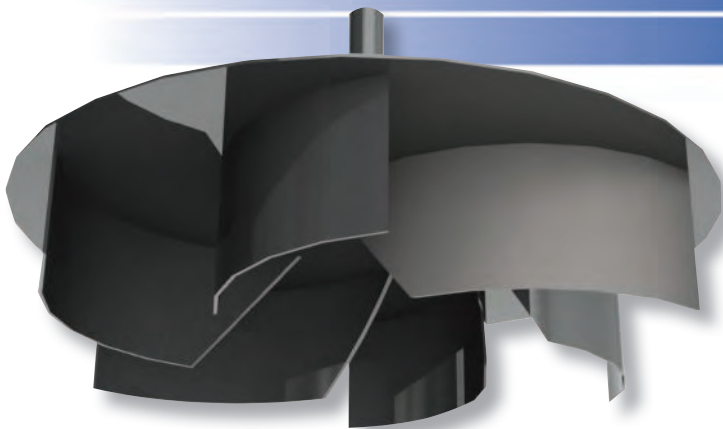
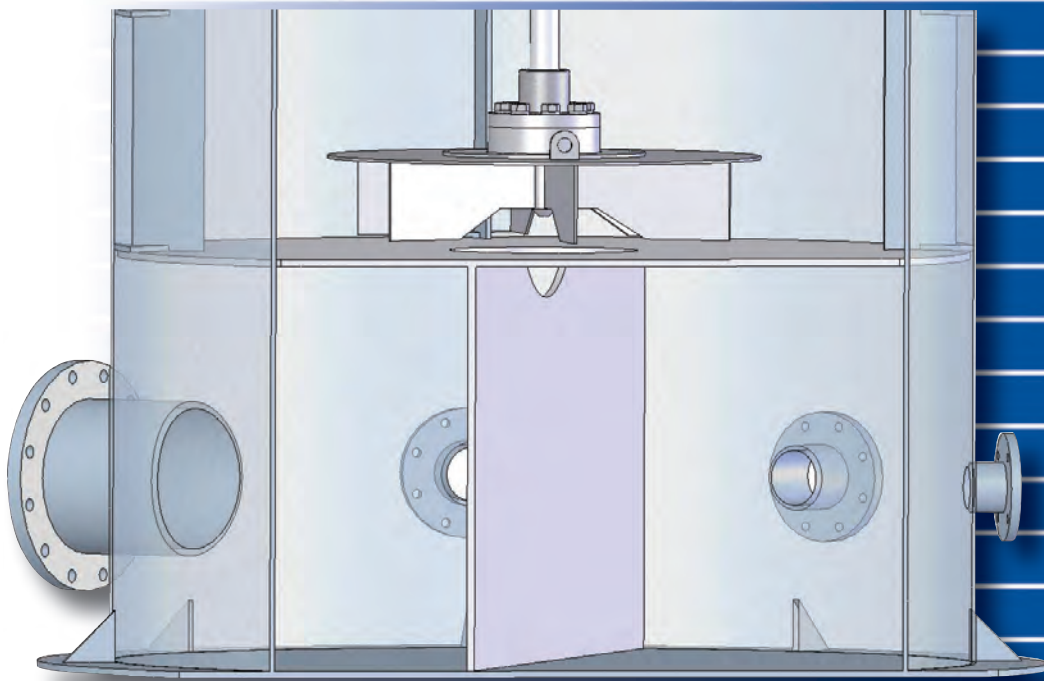


MIXERS FOR SOLVENT EXTRACTION PROCESSES



EXPERTS IN MINERAL PROCESSING

For over 50 years, Hayward Gordon has been actively involved in the selection and manufacture of mixers for the mining and mineral processing industry. In this time, we have developed an expertise and installation portfolio second to none. Hayward Gordon has been at the forefront of many of the largest and most innovative projects in the world. We have established a long list of application expertise which includes Leaching, Carbon Absorption, Conditioning, Pipeline Storage, Cyanide Destruction, Autoclave mixing and Solvent Extraction. Discover how our expertise can improve your process results.

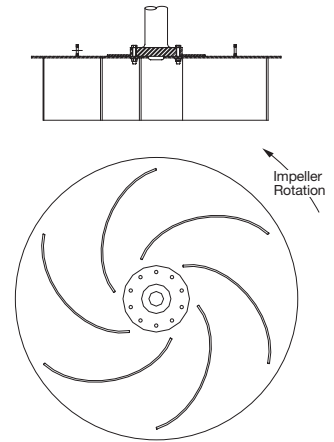
PUMP MIXERS

At the heart of many solvent extraction processes is the Pump Mixer, which determines the quality of phase dispersion while meeting the flow required by production demands. As **Pump Experts**, Hayward Gordon has been designing and manufacturing centrifugal pumps for over 40 years. This has allowed a highly efficient impeller design to be achieved, which meets high productivity requirements while eliminating excessive shear and air entrainment.

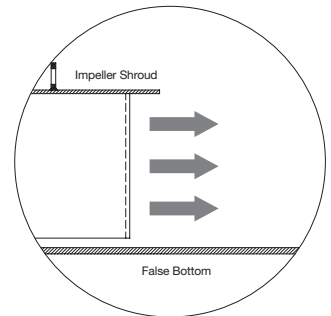
Our pump mixer impeller ensures that an optimal droplet size distribution is achieved, eliminating quiescent zones which limits mass transfer.

A low shear pumper also ensures less chemical loss to entrainment and excellent phase disengagement in the settler. A reduction of air incorporation is also achieved with a high efficiency impeller which in turn reduces crud formation.

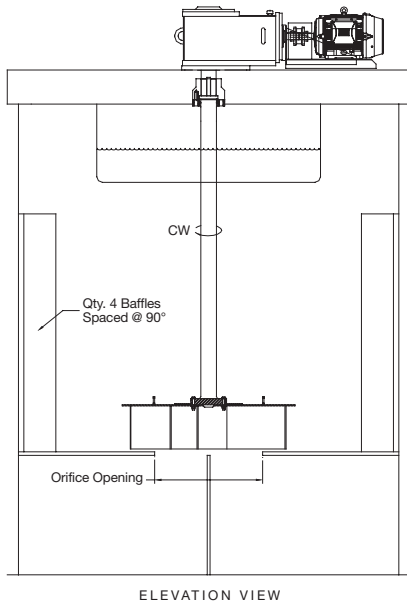
Hayward Gordon chooses the best design pump impeller to maximize hydraulic efficiency for each job. This includes straight blade turbines for lower flow rates.



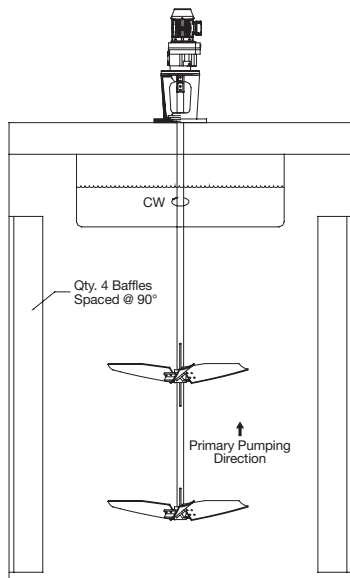
Optimal blade curvature and angle of attack combined with a slightly oversized shroud reduces shear compared to traditional pumper designs which increases hydraulic efficiency.



A slightly oversized impeller shroud works in concert with the tank's false bottom to direct flow off of the blade tips, reducing shear and ensuring more consistent dispersions.



ELEVATION VIEW



ELEVATION VIEW

AUXILIARY MIXERS

Hayward Gordon auxiliary mixers maintain the ideal dispersions created by the pump mixer, during the entire retention time in the auxiliary tanks.

Up-pumping hydrofoils from our AL series are employed to achieve the best results for this application. The low shear, low power consumption hydrofoils also result in low connected HP. Dual impellers are typically installed but this is dependent on tank geometry.

Up-pumping impellers help reduce system head slightly reducing shear and HP requirements of the pump mixer.

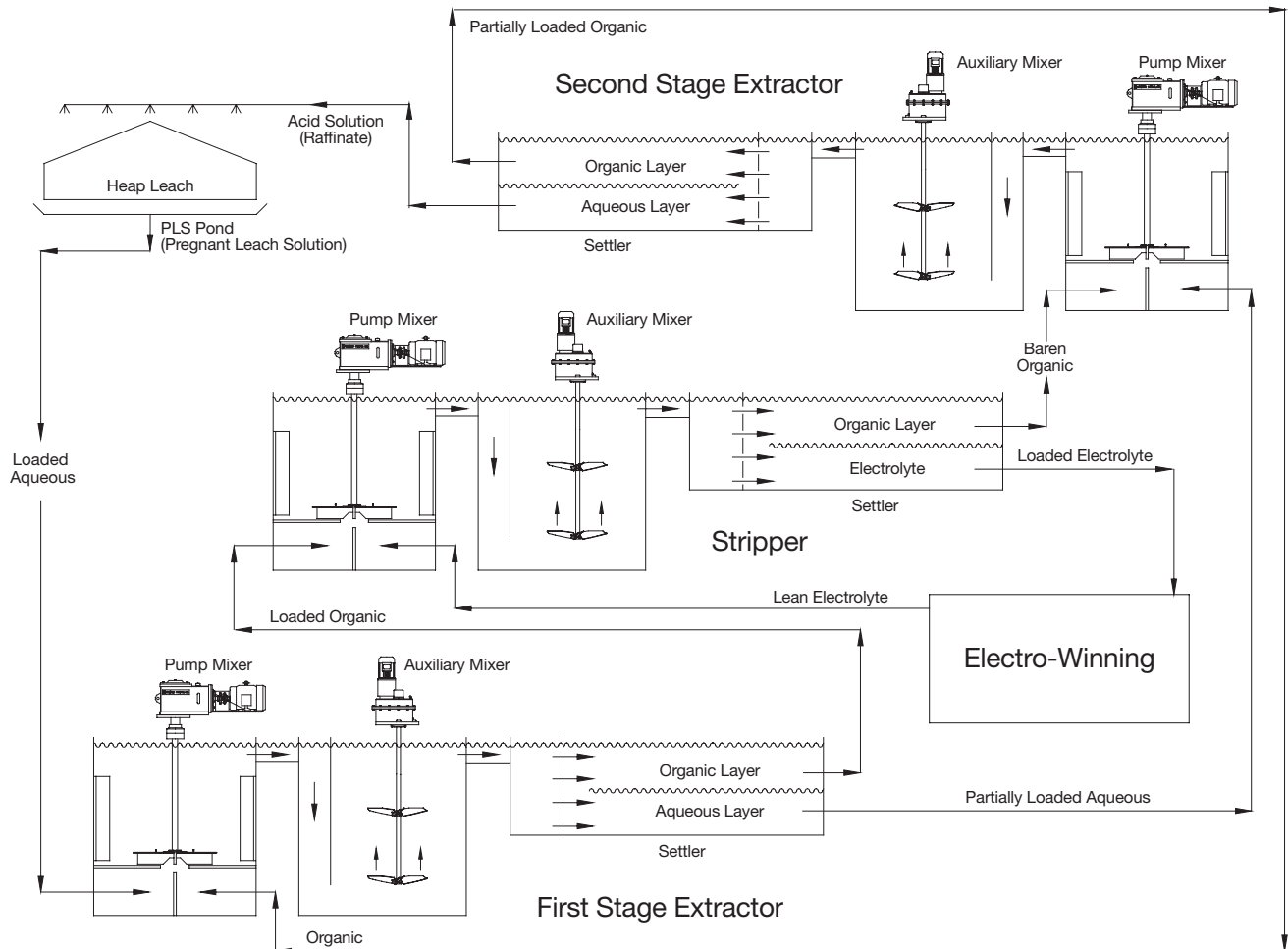
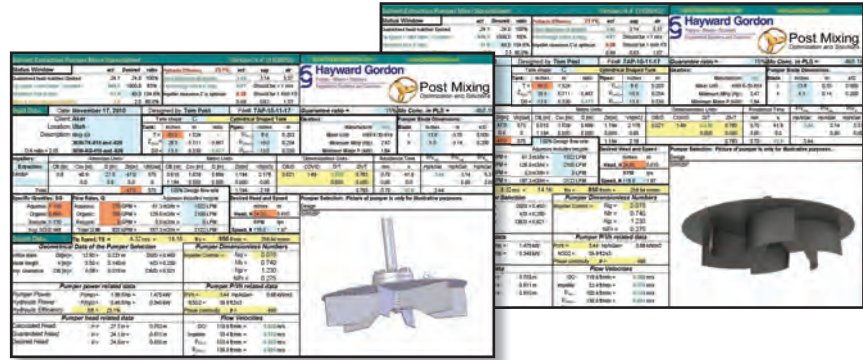
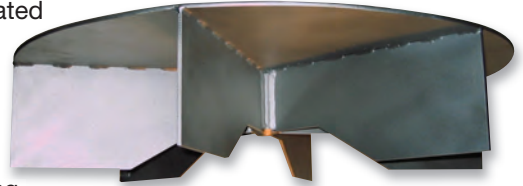
SOLVENT EXTRACTION

Our equipment is designed and selected with flexibility in mind. Both the pump mixer and auxiliary mixers are sized and designed for increased flow and the associated head requirement. With the use of variable speed drives, different flow conditions can be met as the mineral grade fluctuates to help maintain the required production rate at EW.

Almost as important as selecting the best pump mixer, is to ensure the tank geometry is optimized, including false bottom location, orifice opening, entrance and exit piping and tank baffling. Our experienced team can assure system parameters have been optimized based on years of first hand experience. In addition, an optimized auxiliary mixer and tank design has significant impact on maximizing mass transfer as well as minimizing entrainment losses and air incorporation.

Please refer to www.postmixing.com for detailed information on solvent extraction systems.

Powerful customized sizing software, developed with years of experience, allows optimization of numerous scenarios to identify the most efficient mixer configuration and tank geometries.



MIXERS FOR OTHER MINERAL PROCESSING APPLICATIONS



LHX-13C operating on a 59' diameter copper concentrate slurry surge tank.



LHX-160 with 150 HP drives operating on zinc and copper concentrate tanks.



LHX-150 maintaining solids in suspension on a 49' diameter storage tank.



125 HP, LHX-14C mixers on gold leach service utilizing 21' diameter hydrofoils.



200 HP, LHX-160 mixers on 52.5' diameter gold leach tank.



200 HP mixers operating on 59' CIL tanks.



150 HP mixers operating on a zinc pressure leach autoclave.



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