

# LIQUID & SOIL REMEDICATION

Liquid Hydrodynamics LLC

## WHAT WE DO?

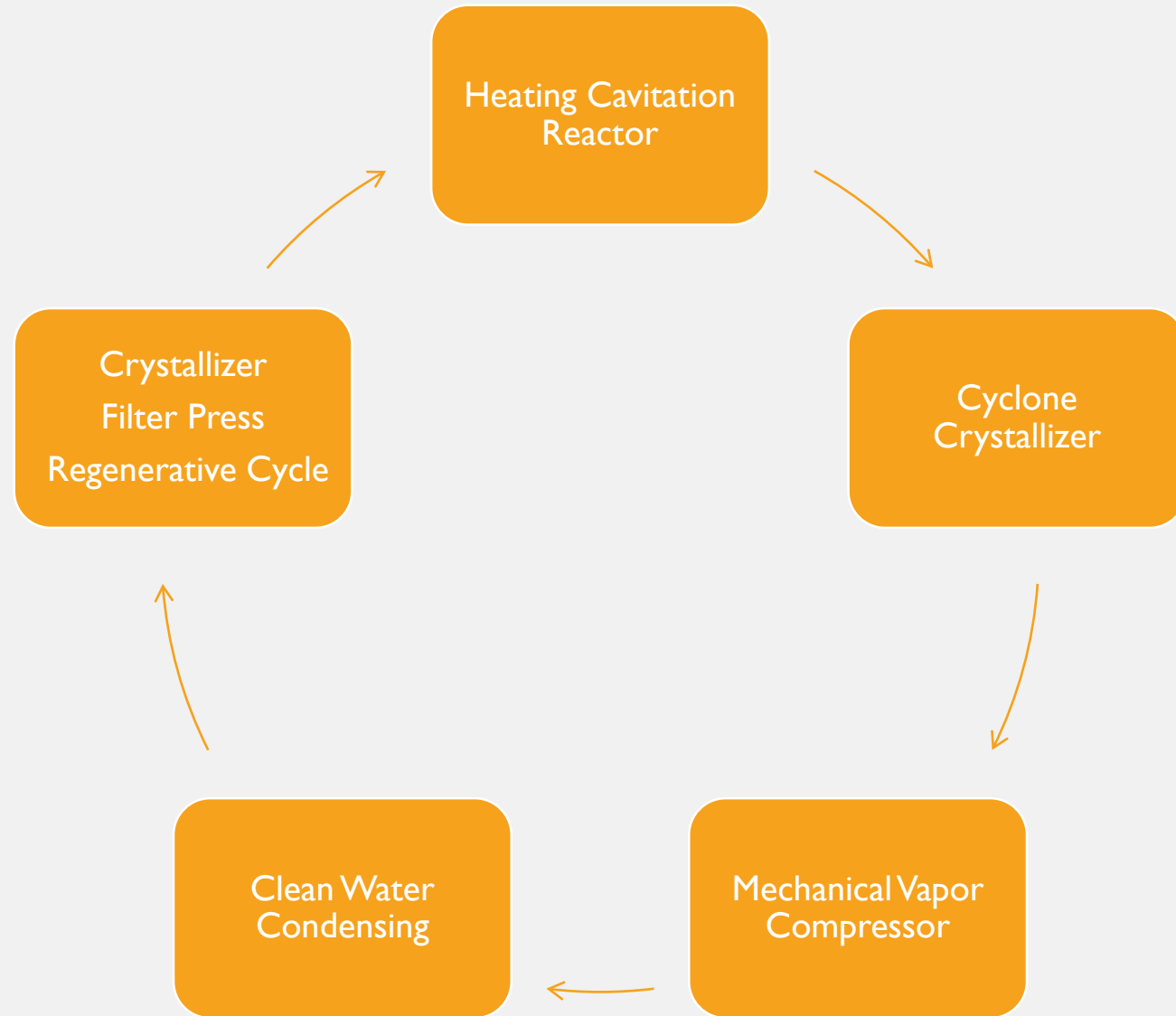
- Our company is a green company that focuses on providing environmentally friendly processes that remediate contaminated liquids(Water) and soils.
- Design and manufacture equipment for water and soil remediation to provide for reuse/disposal of liquids, soils and solids as appropriate for commercial and industrial needs.

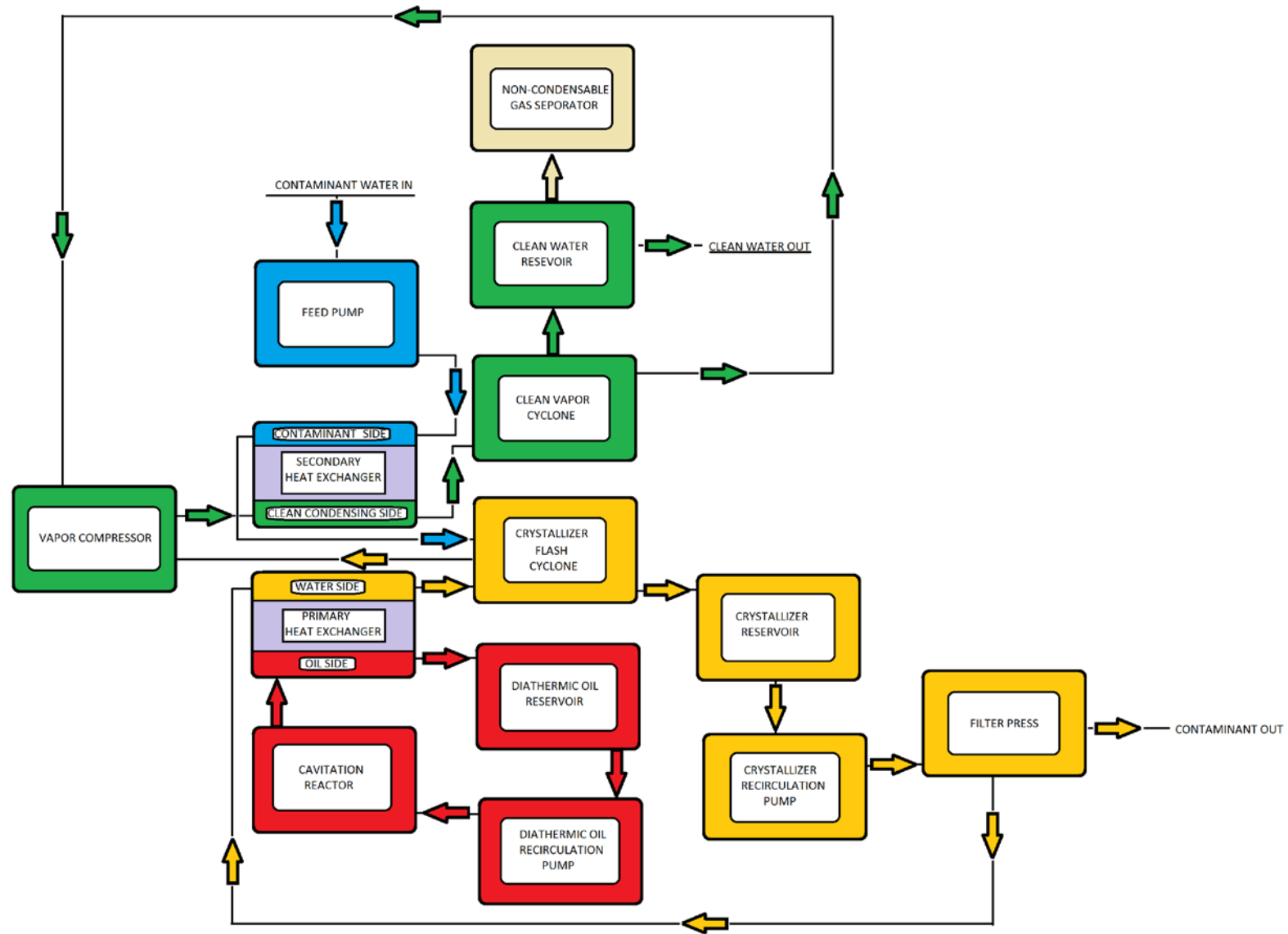
## CURRENT PROCESSES & LIMITATIONS

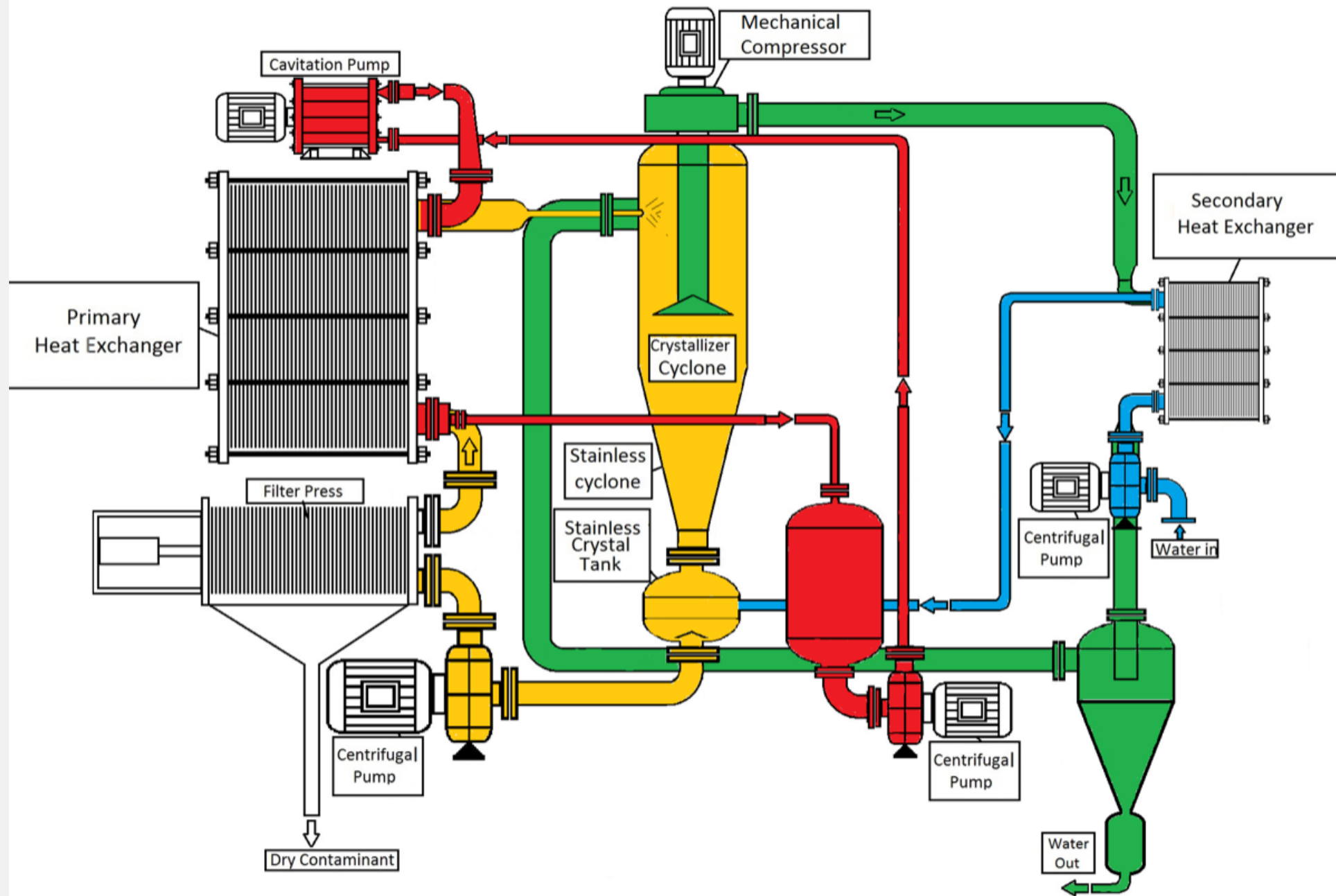
- RO systems are cost effective way to accomplish clean water at a considerably reduced cost.
- An RO system has a regenerative process that can reject up to 50 percent of the water that has already cleaned just to clean the membrane filters.
- Our system is designed to remove contaminants from the water without producing a waste water stream. We accomplish this by, continues crystallization of contaminants followed by a filter press to achieve virtually a zero liquid discharge.

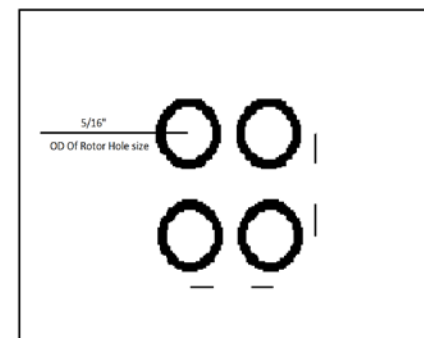
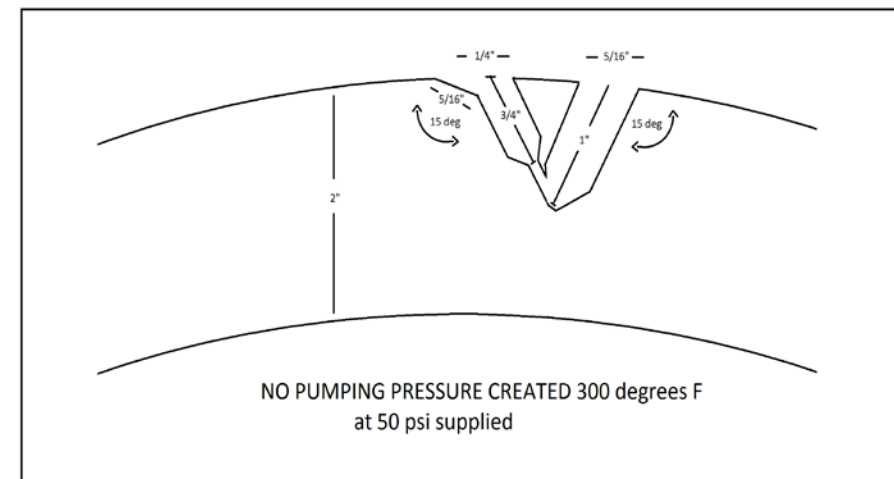
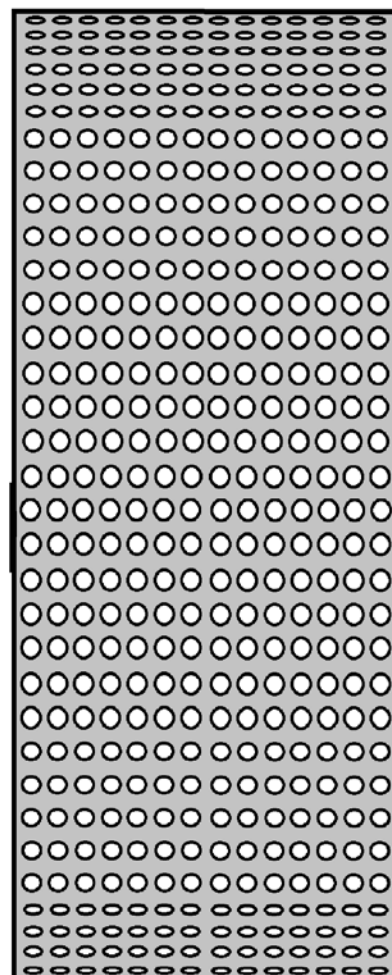
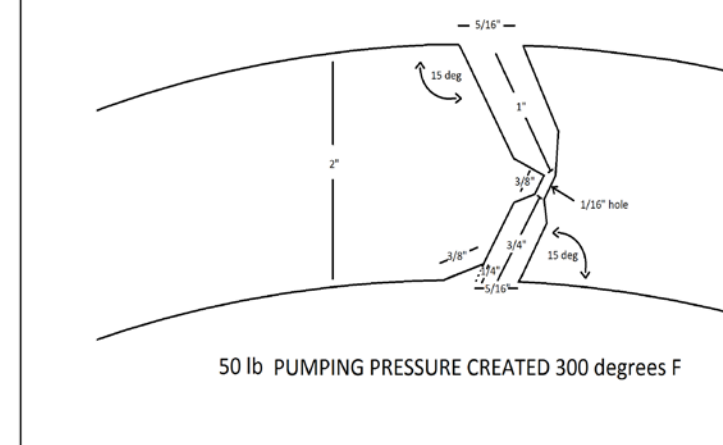
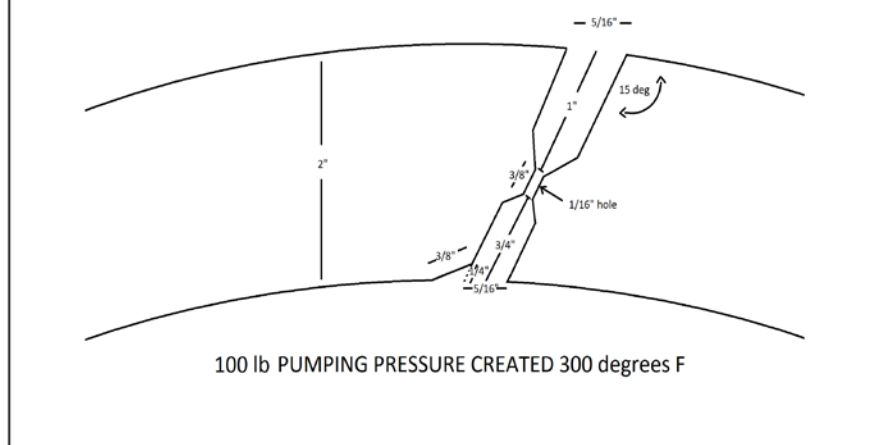
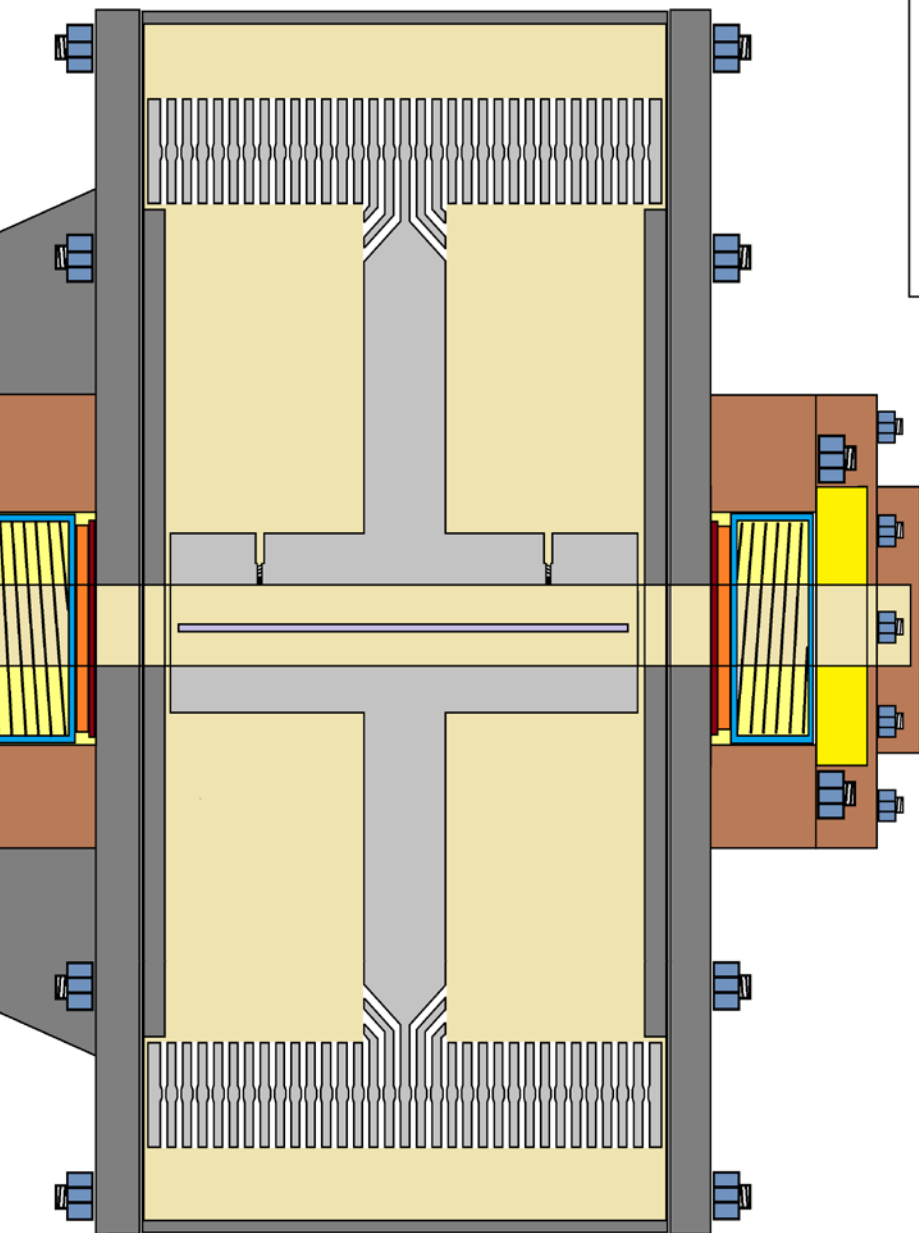
## OUR PROCESS

- No chemicals used in our process
- Lower energy use compared to standard distillation methods
- Energy source depends on customer (Cavitation Pump Heating, Induction Heating, Thermal Conduction Heating, Combustion Heating, Steam Heating, Solar Heating, Convection Heating)
- Low Maintenance
- Removes contaminants including minerals, chemicals, hydrocarbons, bacteria, viruses, and radio active isotopes in a close loop process.

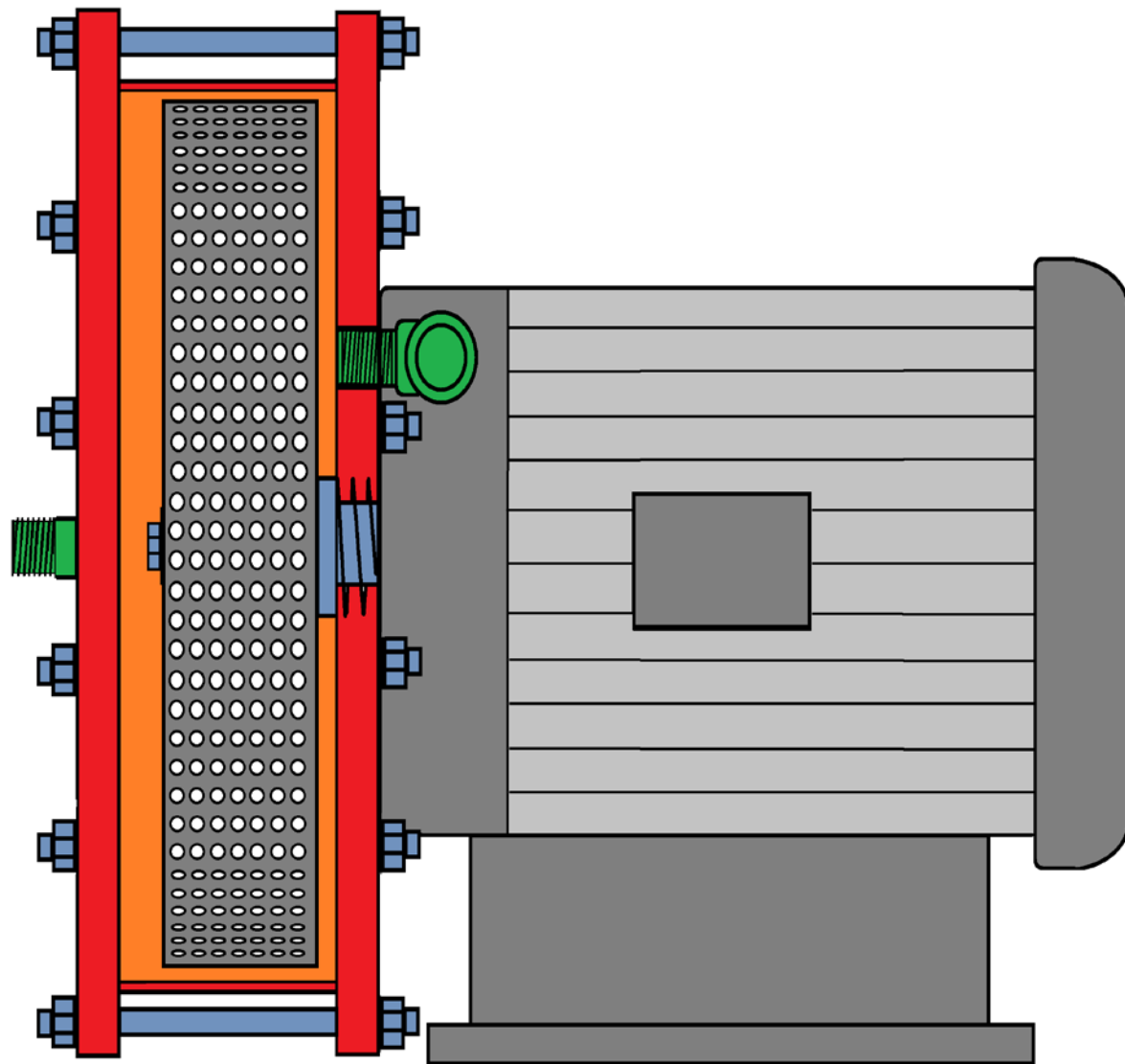
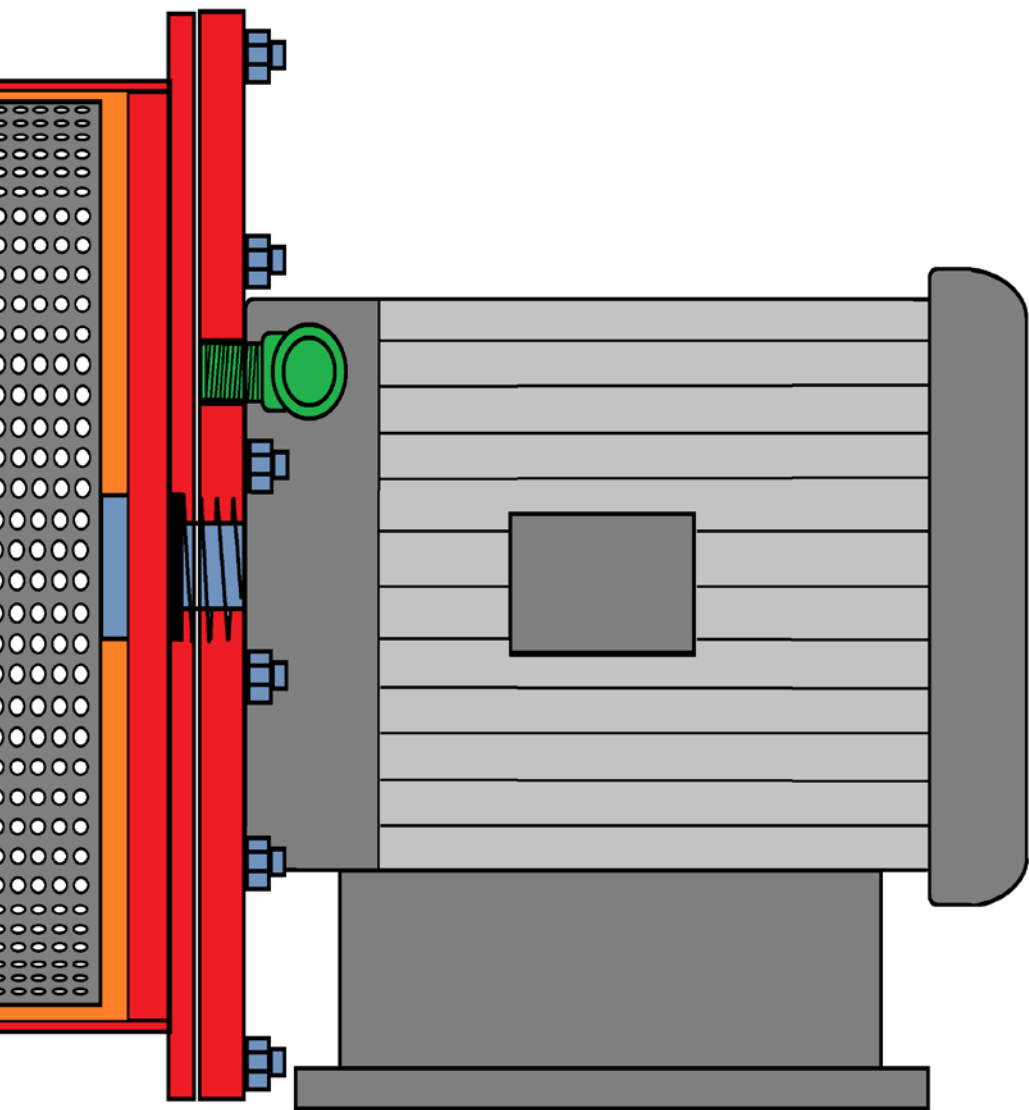












## **OWNER BIO:**

### **Robert W. Brokaw**

- \* Specific expertise as a farmer, banker, general contractor, real estate developer, merchant marine charter boat captain, and realtor.
- \* Background in the design, construction and operation of petroleum plants.  
Holds patents, patent applications, and proprietary information on the following: Conversion of organic materials (plastics) to fuels using pyrolysis, electrocoagulation, and electrical (transferring electrical energy and data between two points without wires using tubular lasers), and ammunition (process to manufacture ammunition without the use of brass or bronze casings).
- \* B.S. in Economics and Chemistry from Whitman College, Walla Walla Washington; an MBA, Masters in Physics and Chemistry from the University of Washington.
- \* Worked with John Ott from 1965 to 1971 and 1978 to 1983 in the development of a full spectrum light process \* (including infrared and ultraviolet light) that is still used today.
- \* Worked with time-lapse photography and studies the effects of light on plants, animals, and humans.
- \* Part owner of MBT Nevada, a transmix plant located in Henderson, NV. MBT processes cross-contaminated fuel such as gasoline, kerosene, and diesel.
- \* Guest lecture in Chemistry at UNLV 2004 to 2014

## **OWNER BIO:**

### **Steven Michael Laub**

- \* Steve is a designer, engineer, welder, fabricator, machinist and mechanic in distillation columns, re-boiler systems, pyrolysis reactors, heat exchangers, accumulators, vapor flow systems, and controls.
- \* Has constructed three pyrolysis reactor plants and one trans-mix plant.
- \* Headed the team that solved the chemical engineering problem of converting plastic back into oil.
- \* Background has been in Mechanical and Chemical Engineering.
- \* Owned three businesses in his career, a sand and gravel operation producing roadbed for paving companies, a steel erection company for large building construction and a truck equipment and fabrication facility designing and building everything from dump trucks to mobile crime labs and armored SWAT vehicles.

## **OWNER BIO:**

### **Albert Marquez**

- \* Civil engineer with over 28 years of experience in asset management, maintenance management practices, and benchmarking of operation and maintenance of facilities with the Nation's largest wholesale water supplier and second largest producer of hydropower in the United States.
- \* Overall experience has been to manage, develop, and to protect water and related resources in economically and an environmental solid manner always in mind for the interest of the American public for the 17 Western States.
- \* Air Force Veteran; 5 years , Staff Sergeant in Civil Engineering Squadron
- \* B.S. in Civil Engineering from the University of Texas at El Paso.
- \* Department of Interior, Bureau of Reclamation representative in the design and management team of Hoover Dam Bypass Project.
- \* 20+ years of volunteer coaching for youth sports.
- \* 25+ years of volunteering at school functions.