

Energy Efficient Falling Film

maratek
Automate | Optimize | Scale

HELIOS

Energy Efficient Falling Film



60+
Gallons / Hour



99+% Recovery



Fully-Automated
Remote Control



Uses 65%
Less Energy



Class I Div I Certified

maratek.com

est. 1967

Oil and Ethanol Recovery Systems

Completely
Automated
Operation

99+%
Ethanol
Recovery

3A
Sanitary
EU GMP

Clean in Place
and Data
Logging

Highest Level
of Safety C1D1
Certified

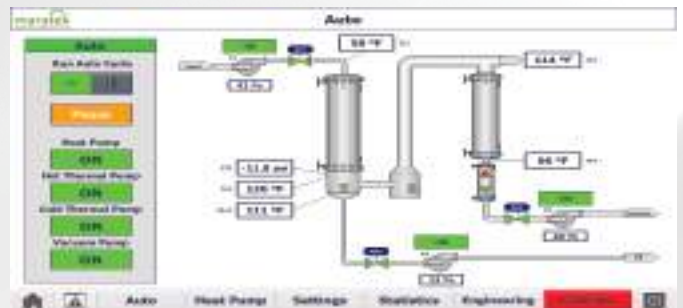
Key Equipment Features

- Minimum 60 Gallons per Hour of Throughput
- Ethanol, Isopropyl, Pentane, Hexane, Heptane and More
- Allen Bradley or Siemens PLC with Programmable Recipes, Data Logging and Secure Remote Access and Control
- Clean In Place System
- Patent Pending
- 316 Stainless Steel, 3A, and EU GMP
- Class 1 Div 1 Group D Explosion Proof and Safety Certified
- Optional Decarboxylation Unit Available
- Heat Pump Solution Available Separately to Pair with Your Existing Recovery Equipment

World Class Technology, Automation and Service

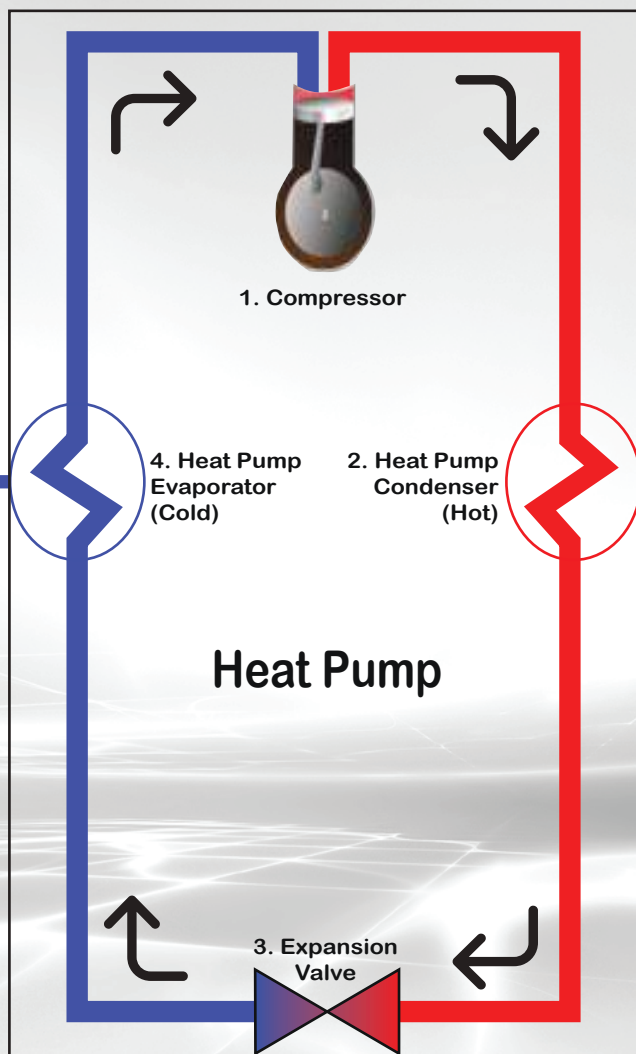
Lifetime remote service at no extra cost. Minimize downtime.

We can seamlessly resolve problems you may encounter right from our office with our remote access PLC. With your permission, we will be able to access your system controls to assist with diagnostics & troubleshooting to minimize downtime. Your organization will also have the same secure remote operational capabilities



Heat Pump Benefits

The integrated heat pump allows the Helios to operate without a chiller and with significantly lower energy cost. The heat captured from condensation is reused to heat the incoming feed. This allows the Helios to use up to 65% less energy than standard recovery systems.



How Does It Work?

1. Starting at the Compressor, it provides a flow of pressurized refrigerant in gas form towards the Heat Pump Condenser and Helios Evaporator.
2. At the Heat Pump Condenser, it exchanges energy with the Helios Evaporator and the pressure of the refrigerant stays high, but the temperature drops which causes the refrigerant to become a liquid.
3. After, the liquid refrigerant flows to the Expansion Valve where the pressure of the liquid is lowered. Then it makes its way to the Heat Pump Evaporator and Helios Condenser.
4. Finally, the refrigerant exchanges energy with the Helios Condenser which turns the liquid into a gas and keeps the cycle moving when returning to the compressor at the beginning.

Having multiple changes in physical state causes the release and absorption of its own energy, making for a very energy efficient and economical cycle.

Maratek
\$252,945

Diffusion Condensing
\$309,841

Conventional FFE System
\$591,300

maratek

Savings based on 15c kW/hr, 24 hours a day operation over a 5 year period. The Helios can save you over \$300,000 in utility expenses with the most efficient Falling Film Evaporator available

About Maratek

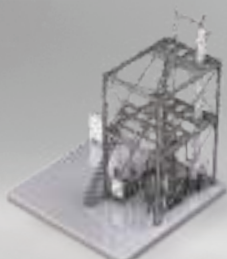
Maratek is an award-winning industry leader in the solvent recycling and cannabis & hemp oil production industries. We strive for the highest safety and quality standards with all our equipment designated as Class 1 Division 1 certified, and UL listed using only **North American stainless steel, parts, and labour**.

With over 50 years of experience in solvent waste and recovery industry, Maratek has solved a wide variety of engineering challenges. Let us provide world-class engineering services to integrate systems and provide closed loop cannabis & hemp oil production processes.

Cryogenic Ethanol Extraction
Series - EV - M



Oil and Ethanol Recovery Systems - OERS & Helios



Fractional Distillation and
Dewatering Systems - F-Series

The Maratek Family of Cannabis & Hemp Equipment and Services



Water Extraction and Refining
Trident and Poseidon



Turnkey Automatic
Winterization Systems - TAWS



MIPs



Isolate
Production



Oil Distillation
Systems



Engineering
Services

Contact

References available upon request with installations in facilities across the US, Canada and globally. Contact us now for a quote on our family of cannabis and hemp solutions!

Call: 905.857.2738 | Toll Free: 1.800.667.6272 | Email: sales@maratek.com | www.maratek.com

Canada
39 Nixon Road
Bolton, Ontario,
Canada,
L7E 1K1

USA
250 Monroe Ave
NW, Suite 400
Grand Rapids, MI
49503

Mexico
Fuente Bella 3299,
Ciudad de Mexico,
14130,
Mexico

maratek
Automate | Optimize | Scale