



# NANOFILTRATION SYSTEM

WITH COLOR REMEDIATION AND ETHANOL RECOVERY

\$20,000 - \$200,000



*110 GPH upgraded model shown*

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**USES 90% LESS ENERGY THAN A FALLING FILM**

Designed with regenerative membranes to have a longer life than traditional filtration methods.

**SKIDS AVAILABLE AS EITHER COLOR REMEDIATION, ETHANOL RECOVERY OR BOTH.**

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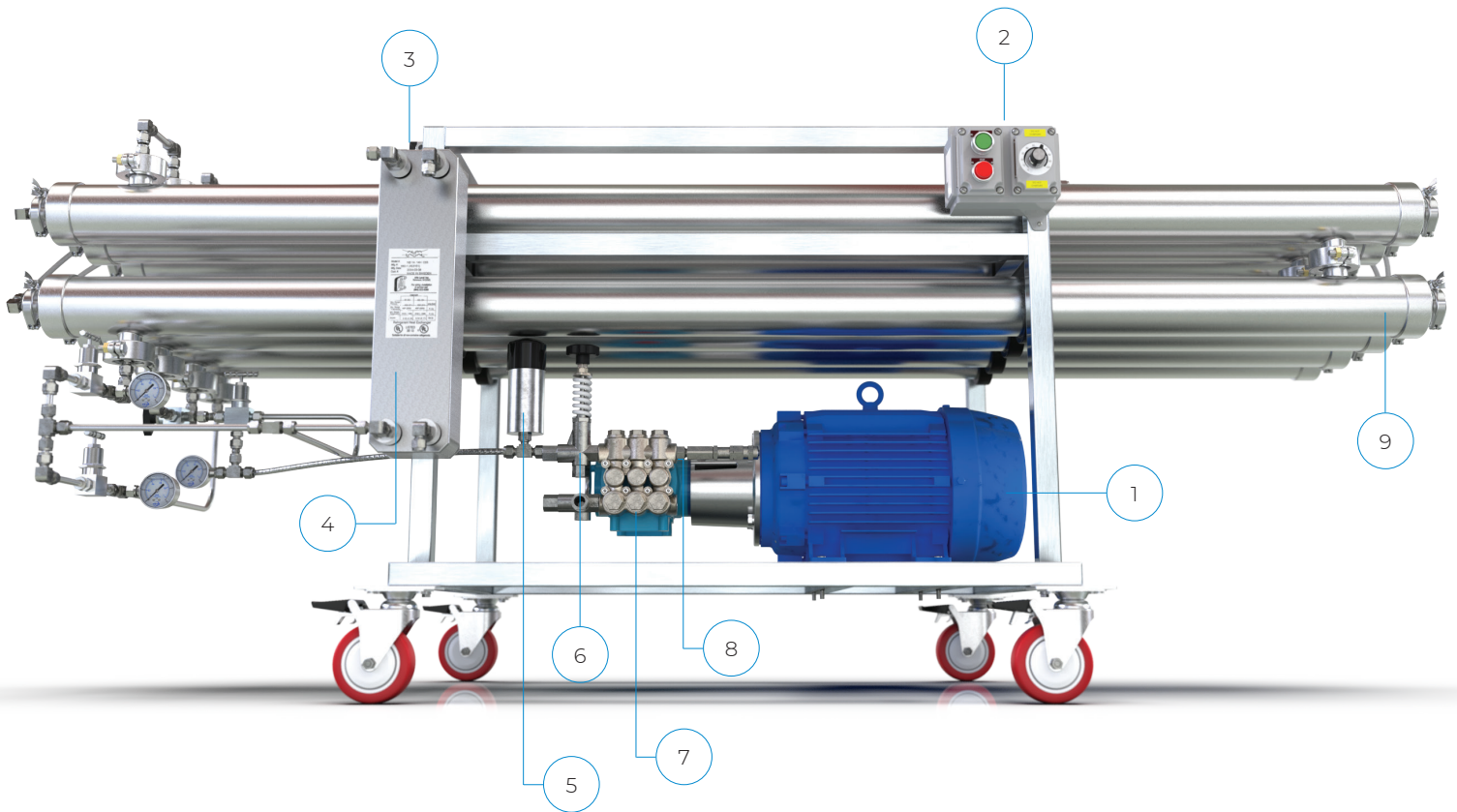
**LABSOCIETY.COM** | 720.600.2037 | INFO@LABSOCIETY.COM

Utilize the energy saving performance of Nanofiltration to remediate color along with recover ethanol all in one skid.\*

Eliminate or greatly reduce your consumables for reducing unwanted color.

Dramatically reduce the load on your downstream evaporation process by using the efficient ethanol recovery membranes.

From benchtop to industrial size there is a filter to fit your scale.



1. Rugged explosion proof motor with cast iron construction
2. Explosion proof remote start stop and speed control
3. Digital, explosion proof flowmeter
4. Vacuum brazed stainless steel heat exchanger with no seals or copper
5. Pulsation dampener to smooth out flow
6. Unloader valve for releasing excessive pressure back to inlet
7. Triplex piston pump with PTFE seals rated up to 1,000 psi
8. Pop off valve for emergency pressure relief
9. Specially constructed spiral membranes to withstand 200 proof ethanol

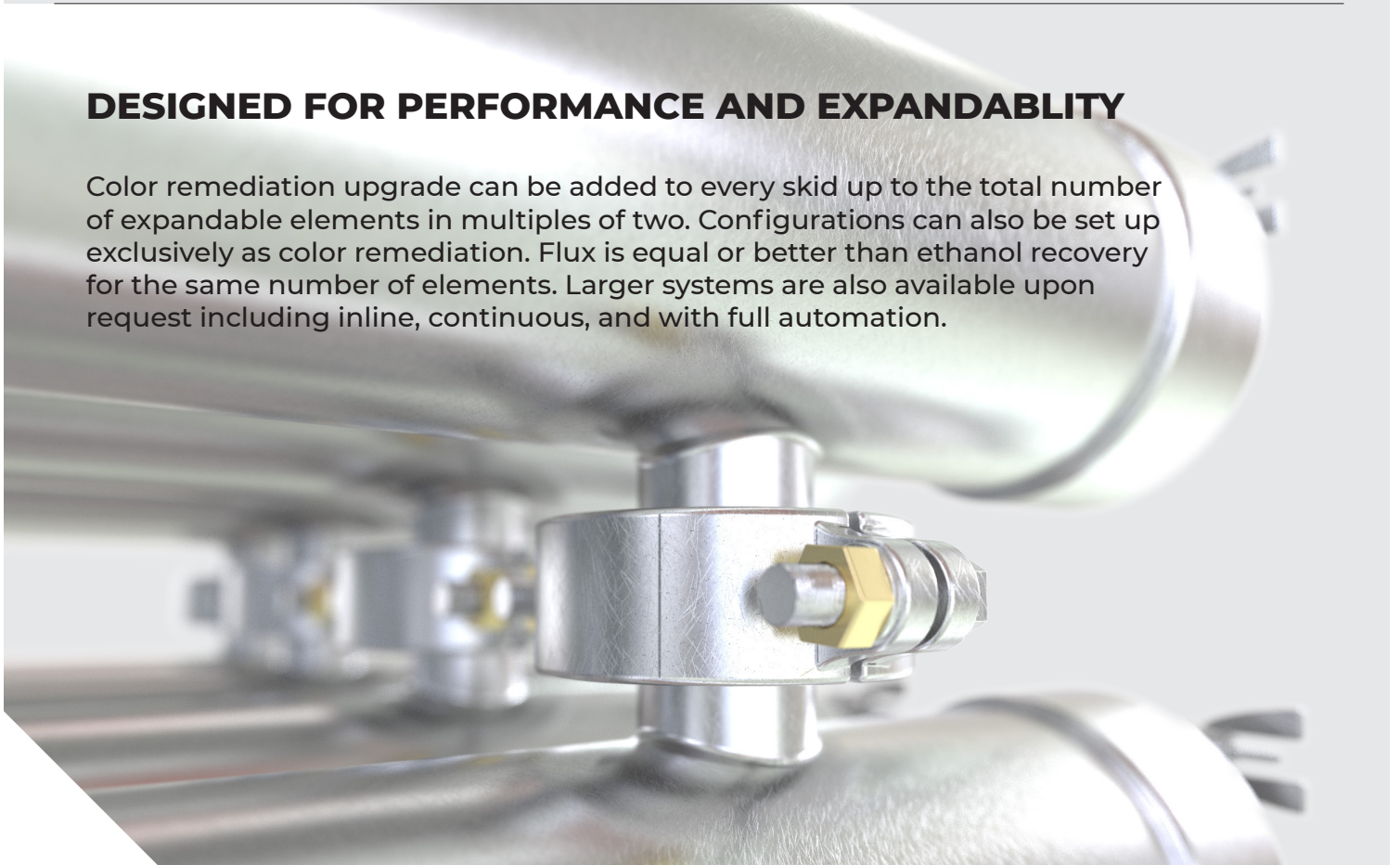
*\*Performance is based upon temperature, pressure and total dissolve solids.*

## Ethanol Recovery

Model	LS-SME-TS	LS-SMS-E-2	LS-SMS-E-15	LS-SMS-E-30	LS-SMS-E-60
Output (GPH)	1	2-3	15-20	30-60	60-150
Maximum Pressure (PSI)	1,000	1,000	1,000	1,000	1,000
Motor Power (kW)	1	1.5	2.0	3.7	7.5
Motor Voltage (AC)	110	110	208-230/460	208-230/460	208-230/460
Motor amp rating	12.6	7.12/3.56	5.8/2.9	12.4/6.2	19.0/9.5
Cooling media (L/min)	5	10	20	30	40
Operating temp (Celsius)	3-35	3-35	3-35	3-35	3-35
Element diameter (Inches)	1.8	2.5	2.5	2.5	3.9
Number of elements	2	2	4	4	4
Expandable total elements	N/A	4	8	16	16

## DESIGNED FOR PERFORMANCE AND EXPANDABILITY

Color remediation upgrade can be added to every skid up to the total number of expandable elements in multiples of two. Configurations can also be set up exclusively as color remediation. Flux is equal or better than ethanol recovery for the same number of elements. Larger systems are also available upon request including inline, continuous, and with full automation.



## COMPETITIVE ADVANTAGES

### Reduces or removes the need for filter media

Decolorizing membranes remove large colored particles allowing you to achieve a much higher potency crude with better color.

### Modular

Systems up to 60 GPH are expandable for both color remediation and solvent recovery to allow for increased output.

### Fast & Easy Cleaning

The onboard heat exchanger allows for maintaining correct temperature when running and also for preheating clean solvent during cleaning. All 316 stainless allows for easy cleaning.

### Easy to move

Test skid and 15 GPH are benchtop units.  
30 GPH will fit through 30" doorway.

## UTILITY REQUIREMENTS

### Electrical

1 GPH / Test Skid, .3kW  
2/3 GPH .5 kW  
15-20 GPH 1kW  
30-60 GPH 3kW  
60-150 GPH 5kW  
Above 150 GPH please inquire

### Pre Filtration

User must pre filter down to a 1 micron before putting solution through membrane system

### Heating & Cooling

Recirculating Heater/Chiller recommended for all models  
1 GPH / Test Skid XkW  
2-3 GPH XkW  
15-20 GPH XkW  
30-60 GPH 3k heating and cooling  
60-150 GPH 5kW heating and cooling

## UPGRADES

### 2 in 1 Decolorizing Membrane Upgrade

Adds a second set of membranes and a 3-way valve which allows you to select between your standard solvent recovery membranes or membranes that will do color remediation.

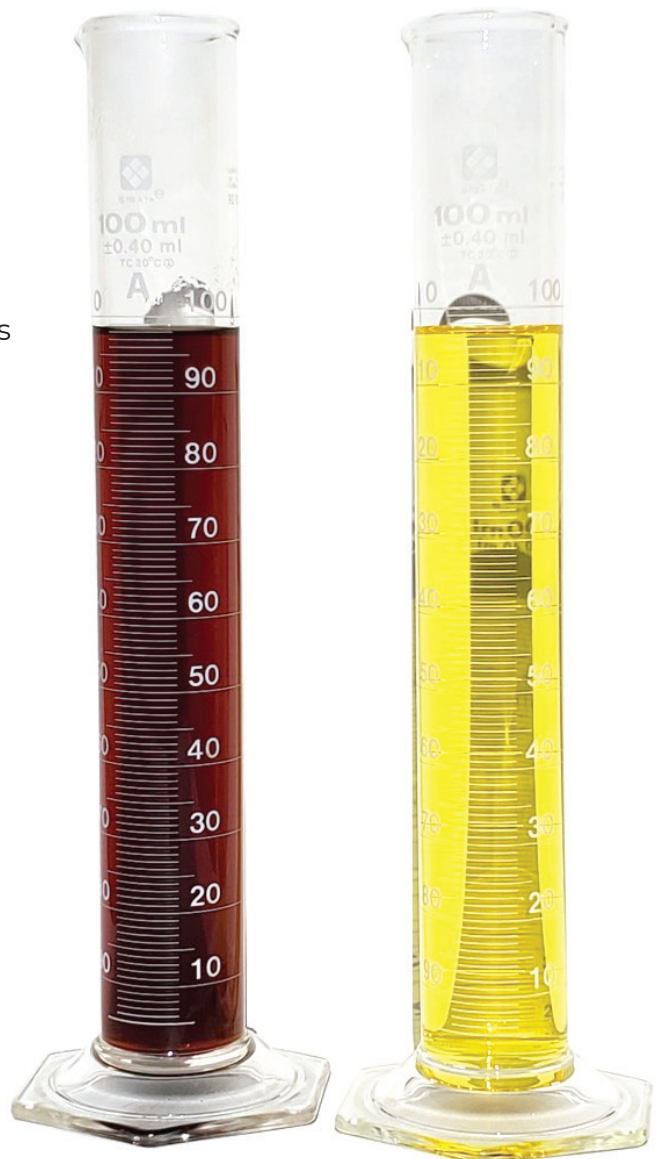
### 2 in 1 Terpene Separation Upgrade

Adds a second set of membranes and a 3-way valve which allows you to select between your standard solvent recovery membranes or membranes that will do terpene separation.

**Fully automated systems available with touch screen HMI.**

### Hydrocarbon Membrane Upgrades *(coming soon)*

Allows you to run Butane, Propane, Hexane, Pentane or Heptane as a solvent.



Before & After color remediation at 20:1 dilution