

# A3-USA Multi Phase Separation (MPS)



## **A3-USA, Inc.**

1350 Biddle Ave  
Westmoreland City, PA 15692  
Phone: 724.871.7170  
Fax: 888.525.9458  
sales@a3-usa.com  
www.a3-usa.com

## **A3 Northwest, LLC**

61876 Dobbins Rd  
Bend, OR 97702  
Phone: 503.473.6419  
Fax: 888.525.9458  
sales@a3nw.com  
www.a3nw.com

**Water and  
Wastewater  
Membranes**

# A3-USA Multi Phase Separation (MPS)

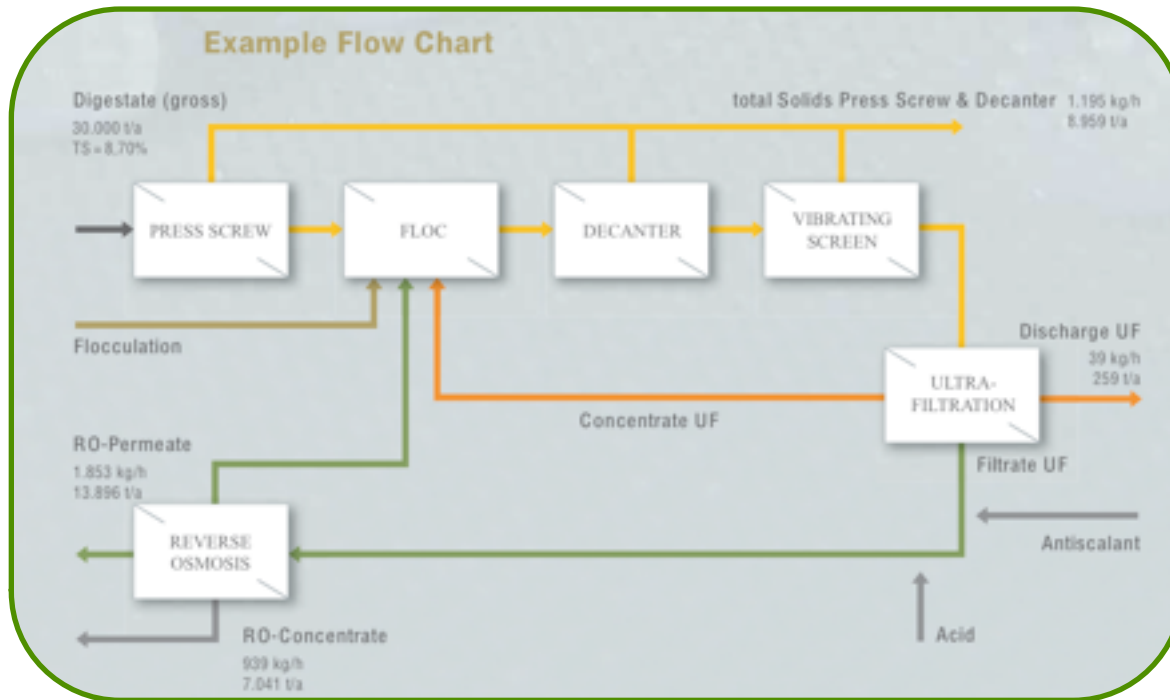
Biogas and Bioethanol plants produce waste streams that are difficult to treat but also offer the opportunity to recover valuable resources. A3 offers a modular, comprehensive treatment process applying membrane separation technology used for the treatment of fermentation residues. The result of the A3 concept is clean water for reuse or discharge plus the recovery of valuable nutrients for use in agriculture.

## Process

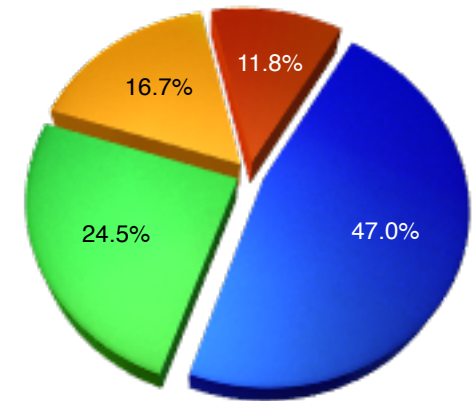
- Typical plant size is greater than 15,000 gpd
- Plant footprint starting from 2,600 ft<sup>2</sup>
- Solid-liquid-separation with screw press and/or decanter
- Treatment of liquids with ultrafiltration and reverse osmosis
- Production of solid/liquid manure and clean water for direct discharge to receiving waters or for reuse purpose

## Benefits

- Converts waste into resources:
  - Clean water
  - Concentrated solids
  - Concentrated liquid fertilizer
- Reduced costs associated with disposal/transportation of digestate
- Decreases storage volume requirements for digestate/waste
- Reduces risks associated with waste storage



**Output Treatment Unit - Example**



- RO Permeate
- RO Concentrate
- Solids Screw Press
- Solids Decanter