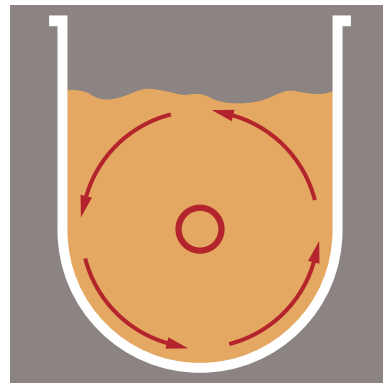


# High Solids Enzymatic Hydrolysis Reactors

*New capability to produce more highly concentrated sugars streams*



- Designed for operation at total solids loadings greater than 20% (w/w)
- Reactors are operated in a batch mode with a 36-hour turnaround time
- Two reactors are staged to accept a continuous stream of pretreated biomass to achieve semi-continuous processing



- Vigorous mixing by alternating paddles maintains temperatures at 40° - 80°C
- After 24-30 hours, the pretreated biomass slurry is sufficiently liquefied and pumped to a vertical stirred tank reactor to complete enzymatic hydrolysis (if necessary)