

INTRODUCTION

ABEC's single-use Custom Single Run (CSR) offers a General Mixer (GenMix) solution for harvest, viral inactivation, downstream pooling, solutions prep, and other bioprocessing applications. By replicating stainless steel technology design standards, CSR GenMix systems and Disposable Containers (DC) allow optimal mixing performance and ensure homogeneity by eliminating concentration and temperature gradients with the added flexibility single-use technology offers. CSR GenMix is equipped with an optional jacket for heating or cooling fluids depending on the application needs. ABEC's CSR GenMix has a bottom dish head with a center mounted low-profile impeller and agitator system, enabling agitation capability up to 10:1 turndown volume.

BENEFITS

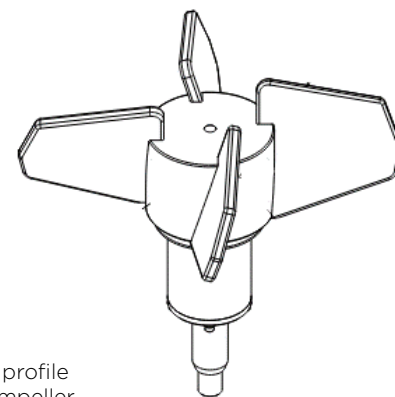
- Diverse process applications
- Maximum processing flexibility
- Rapid product changeover
- Fastest transfer times
- Lowest supply chain risk

UNIQUE FEATURES

- Customizable sizes and configurations to suit process and facility requirements
- Lowest blend times with highest system power input
- Largest processing volumes
- Highly customizable system and DC to suit process and facility needs
- Baffles welded to sidewall of CSR holder
- Up to a 1.5" harvest or drain flow path
- Level sensing via load cells
- Temperature control option via dimpled jacket
- DC installation and removal in less than an hour
- Non-proprietary control system options
- Global, in-house manufacturing of equipment and DCs
- Transparent supply chain with multiple Qualified Suppliers



7,000L Vw
CSR GenMix

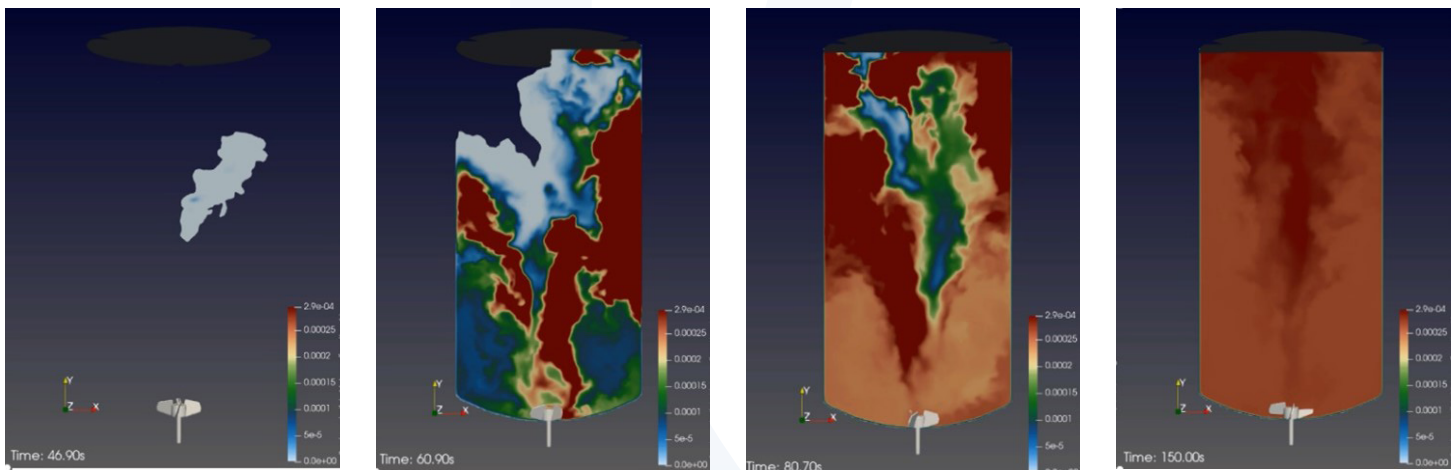


ABEC's low profile
four-blade impeller

Typical Specifications

ABEC's CSR systems are customizable to meet specific process and operational requirements. Typical design elements and specification ranges are shown.

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|--------------------------------|---|
| Working Volumes | Customizable: 25L up to 7,500L |
| Turndown Ratios | Customizable: Up to 10:1 with sensing and agitation capability |
| Agitator Mounting | Bottom Center |
| Agitator Motor Coupling | Mechanical |
| Agitator Seal | Mechanical/SiC |
| No. Baffles | Up to 4 |
| Impeller Type | Customizable: Low-profile impeller |
| Filtration Capability | Full integration with filtration systems including pumps and sensors |
| Performance @ 7,000L Vw | Blend time: < 100 s System Power Input: > 300 W/m ³ |
| Process Controls | Customizable: Open architecture via Emerson, Rockwell, or Siemens hardware and software |



7,000L Vw CSR GenMix blending profile at mid-range agitator speed (173 rpm)