Success Story

Improve Productivity and Reduce Risk with Biostat® RM

Generating an adequate number of cells for the inoculation of a production bioreactor is a time- and cost-intensive process. Using a typical batch seed train with common seed ratios of 1:12, it takes two steps, with five days each, to seed a final fed-batch culture. This presents several challenges, which a Sartorius customer was hoping to resolve. By introducing the Biostat® RM and the benefits of an intensified rocking motion bioreactor at 1 L scale, the customer reached a seed ratio of 1:120, saving four days of seed preparation time and enabling automatic transfers.

Customer Challenge
- Low-cell-density batch seed cultures required intense manual handling.
- Missing the ideal transfer point increased the risk of deviating from the specified design space.
- Total process time limited high-throughput batches.

Provided Solution
- Perfusion-enabled Biostat® RM led to high seed ratios, saving 4 days of culture time.
- BioPAT® ViaMass control provided automated and closed inoculum transfer

- Before
  - Two seed steps, each with a five-day culture time
  - Manual sampling efforts to determine seed activities
  - Risk of operator mishandling

- After
  - Only one seed step, saving four days
  - BioPAT® ViaMass identifies perfect transfer point
  - Automatic transfer eliminates risk of operator mishandling

20% decrease in process time

10× higher seed cell concentrations

Reduced process risks by automating manual steps