



**TURNING SCIENCE INTO SOLUTION**

# Sartorius Stedim Biotech - Goettingen



# Global Presence



# Sartorius Stedim Poland – Kostrzyn Wielkopolski



# Our Customers



## Sartorius Stedim Biotech

Pharmaceutical and Biotech Industries

Gene Therapy and Stem Cell Research

Corporate and Institutional R&D

## Sartorius Stedim Biotech – Our Products



Filtration



Fluid Management



Fermentation



Purification

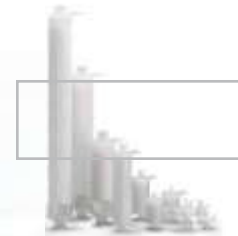


Lab Technologies

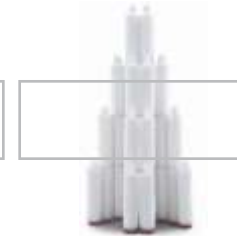


Service

# Filtration



Membrane Filter  
Capsules



Membrane Filter  
Cartridges



Sartochek@ 4

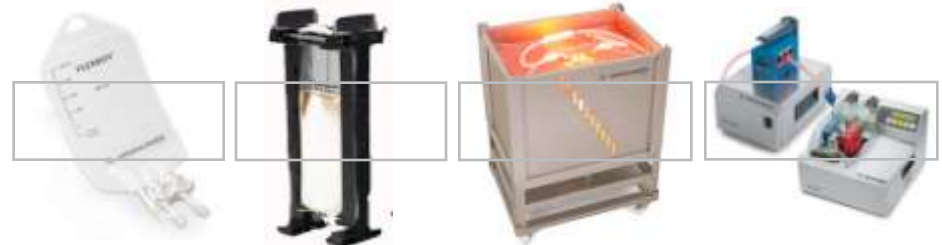
Pre-Filtration

Bioburden Reduction

Sterile Filtration  
(Liquid | Air | Gas)

Mycoplasma Removal

# Fluid Management



Flexboy®

Celsius®-Pak

Flexel® 3D Bag  
and  
Palletank®

BioSealer® |  
Biowelder®

Mixing, Storage and  
Transportation

Sterile Connections and  
Disconnections

Freeze & Thaw Systems

Aseptic Transfer Systems

Drug Delivery &  
Parenteral Nutrition



# Fermentation



BIostat® Cultibag  
RM 20|50

BIostat®  
Qplus

BIostat® Cultibag  
STR

Single-use Bioreactors  
Re-usable Bioreactors  
Automation | Control  
Feed | Gassing Systems

# Purification



Sartobind Q  
Single  
Sep® nano

Virosart® CPV

SARTOFLOW® Alpha plus

Cell Harvesting

Crossflow Filtration  
(MF | UF | DF)

Membrane Chromatography

Virus Clearance

# Services

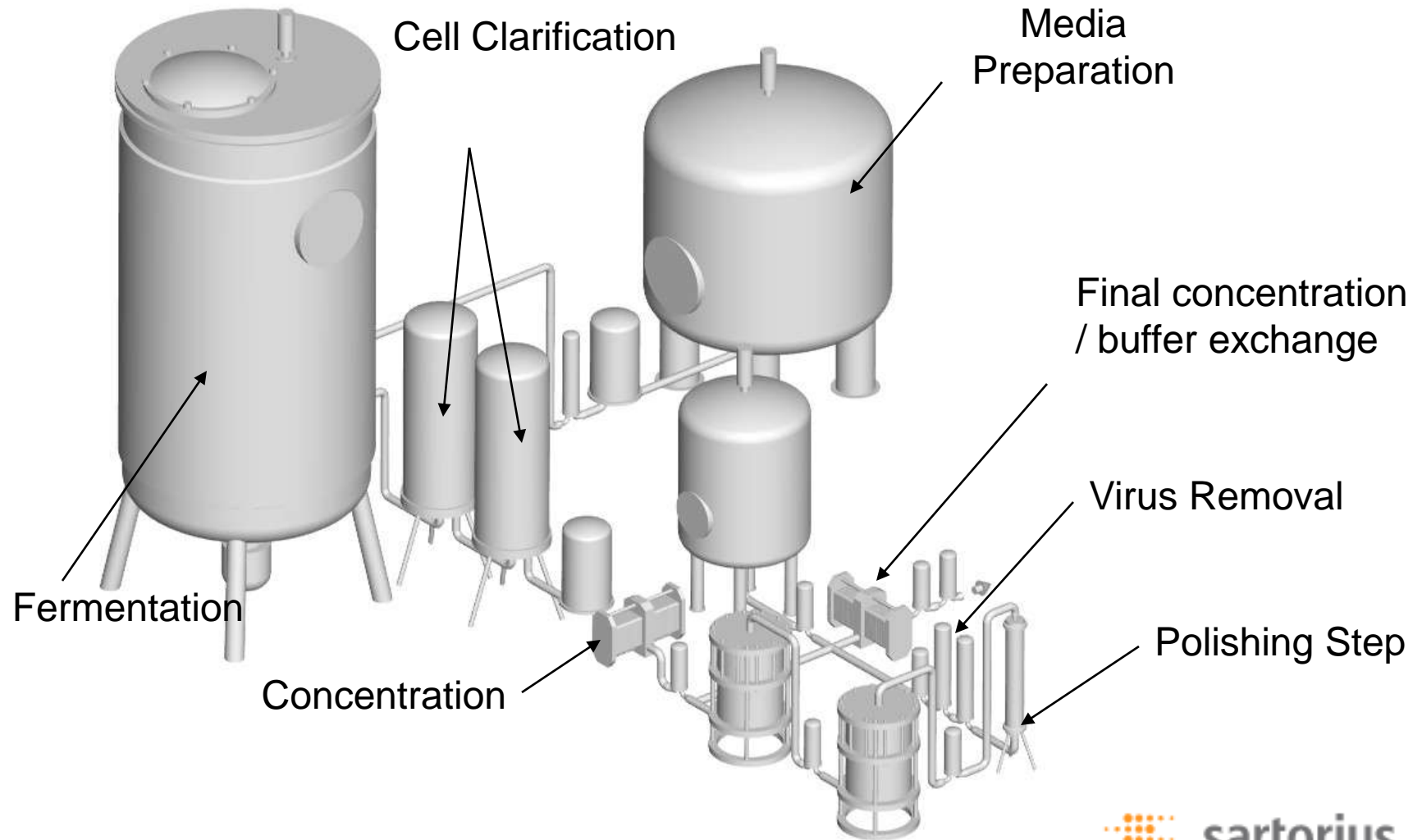


Application  
Development  
Process Surveys  
Feasibility Studies &  
Small-Scale Trials  
Cost Models  
Technical Service  
Validation  
Operator Training  
Regulatory Support

# Single Use Bag Technology



# Process Overview – Traditional Technologies



# Mixing



# Fermentation / Disposable Bioreactors





# Fermentation / Disposable Bioreactors

- **Electronic, Optical and Chemometrical Sensors**
  - Adapted to disposable technology
  - single use concepts
  - Sensors fully integrated in bag design

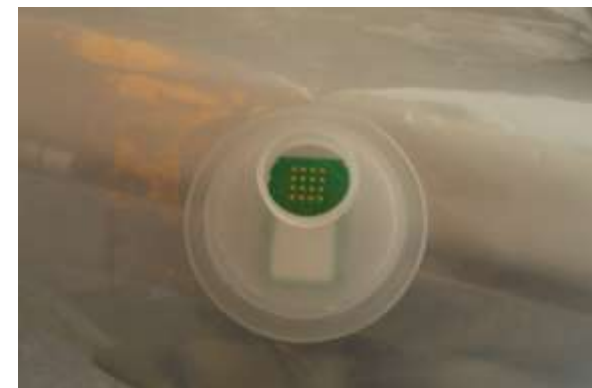


**Dissolved Oxygen (DO)**

**pH Sensor (pH)**

**Temperature**

**Conductivity**





# Single Use Adapter Plates for Cross Flow Systems



# Disposable Assembly of Filter Capsules



# Connections to the Disposable World

**Non Steril:** Triclamp, Quick Connect Couplings, Luer Conne

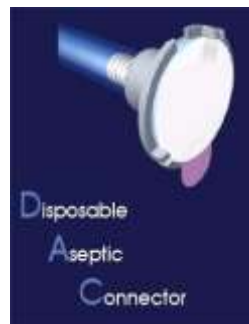


**Steril :** Aseptic Connectors, Connections under Laminar flow

Tubing Sealing and Welding Devices (aseptic), Steam To, Steam

Thru

Connectors



## Biosafe ports



**FlexAct. Configurable solutions.  
Flexible, ready-to-connect unit operations.**



## Single Use Bag Technology – Key For Success

- Decrease of Validation Complexity
- Increase of Process Security
- Increase of Production Efficiency
- Decrease of Dwell Time
- Elimination of CIP & SIP operations
- Flexible move from one process to another
- Reduced Risk of Cross Contaminations

**Get faster to market!!!**





Thank You Very Much For Your Attention.