Tofflon Best Practice for Human Vaccine Manufacturing

www.tofflon.com
About Tofflon
超过25年制药行业制造经验

产品遍布全球40多个国家及地区

服务全球2000多家制药企业

8000多台套设备及系统遍布全球

Years of Experience

Countries & Regions

Pharmaceutical Customers

Equipments & Systems Installations Worldwide

Tofflon Global Footprints
What We Learn Today and Tomorrow in

The Science of Drug Manufacturing and
Process Equipment Manufacturing

For the Future of

Smart Pharma Factory Building
Tofflon Innovation

Drug Development

- Small Molecules
- Large Molecules
- Stem Cell
- Tissue Regeneration

Drug Manufacturing

- Large-scale Mfg (Generics)
- Flexible Mfg (Biotech)
- Cell Therapy Mfg
Tofflon Innovative Solutions

- Process Scale-up and Technology Transfer
- Advanced Drug Manufacturing
- Next Generation Drug Manufacturing
  (Continuous Mfg. & Smart Mfg.)
Tofflon Upstream Capabilities

- Wave Bioreactor
- SUB
- Incubator System
- Cell Bank & Isolators
- Upstream Solutions
- Bioreactors
- Vessel System
Tofflon Downstream Capabilities

- Freeze & Thaw systems
- ILC, ILD, Integrated Systems
- Chromatography column & Systems
- TFF Systems
- Hollow Fiber systems
- Vessel Systems

Downstream Solutions
Tofflon Fill & Finish Capabilities

Auto Packaging Systems
Intelligent Inspection Systems
Barrier Systems
Capping Machine
Air Handling Unit
Clean Room
Stopper/Cap Washer
Auto Formulation Systems
Aseptic Filling Line
Auto Loading Systems

Washing & Drying
Rubber Cleaning
Filling
Capping
Inspection
Packaging

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Integrated Solution

- Process Flow Diagram (PFD)
- Piping and Instruments Diagram (P&ID)
- Factory Layout
- Bioprocess
- 3D Configuration
- Freeze Dryer
- Row-by-Row
- Isolator
- Auto Solution Preparation Systems (ASPS)
- Filling Line (Washer, Tunnel, Filler, Capper, External Washer)
- DCS

EU Grade C (ISO 8) / EU Grade D
What Advantages KUFill Is Offering

- cGMP Compliance
- Modular Building Interfaces
- Automation and Isolation
- Systems Integration
- Modular Equipments
- Expandable Factory
- More New Technologies
- Integrated Project Management
- Added Value Technical Support and Service
Case Study
www.tofflon.com
Case study 1: Recombinated Vaccine

Strengths:
- Turnkey project
- Integrated solution
- Multiply planform
- Disposable system
- Fast Delivery
- Flexible operation
Case study 2: Inactivated Vaccine

**Product**: Inactivated Virus vaccine

**Problem statement**: Closed and contained operation for handling of virus

- In production for virus inoculation, virus distribution, harvesting fluid handling, in QC for QC purpose viz virus sterility inspection, mycoplasma inspection, titer and other experiments.
- Isolator designed with incubator cart to transfer material from isolator to incubator through RPT port.
- Considered sterility requirements and toxicity protection requirements for isolator.
- The internal dimensions of the isolator chamber are reasonably customized according to the different equipment, which are involved in different process.
- Separate air supply and separate air exhaust for isolator to ensure that isolator has no effect on the control of the differential pressure in the laboratory.
Warmly Welcome

To Tofflon

Tofflon Vision:

Smart Pharma Factory Builder