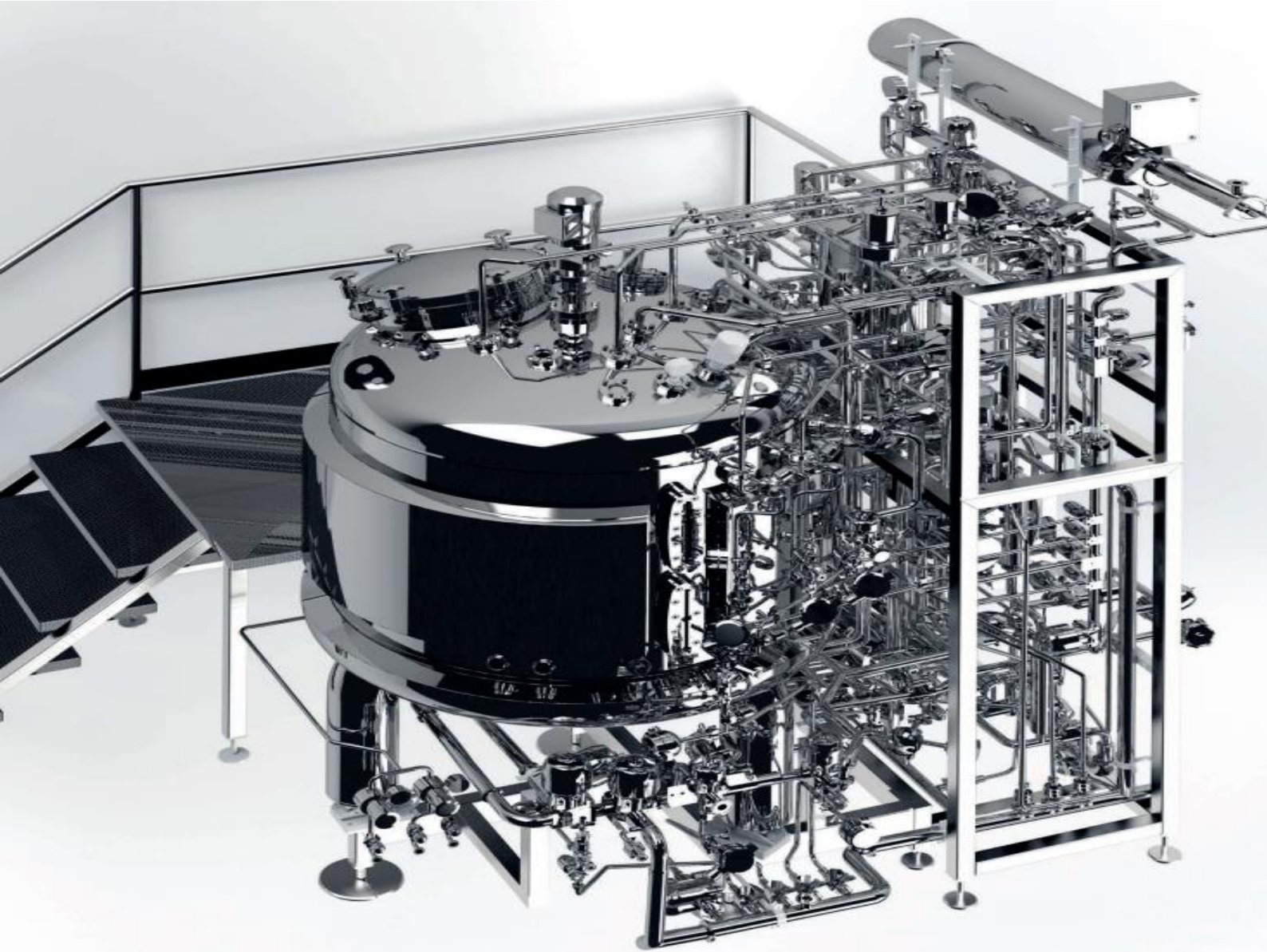


# ADB ADB TECH SOLUTIONS ADB

Engineering for Better Technology



OPTIMIZED DESIGN BUILD  
MANUFACTURE  
QUALIFICATION

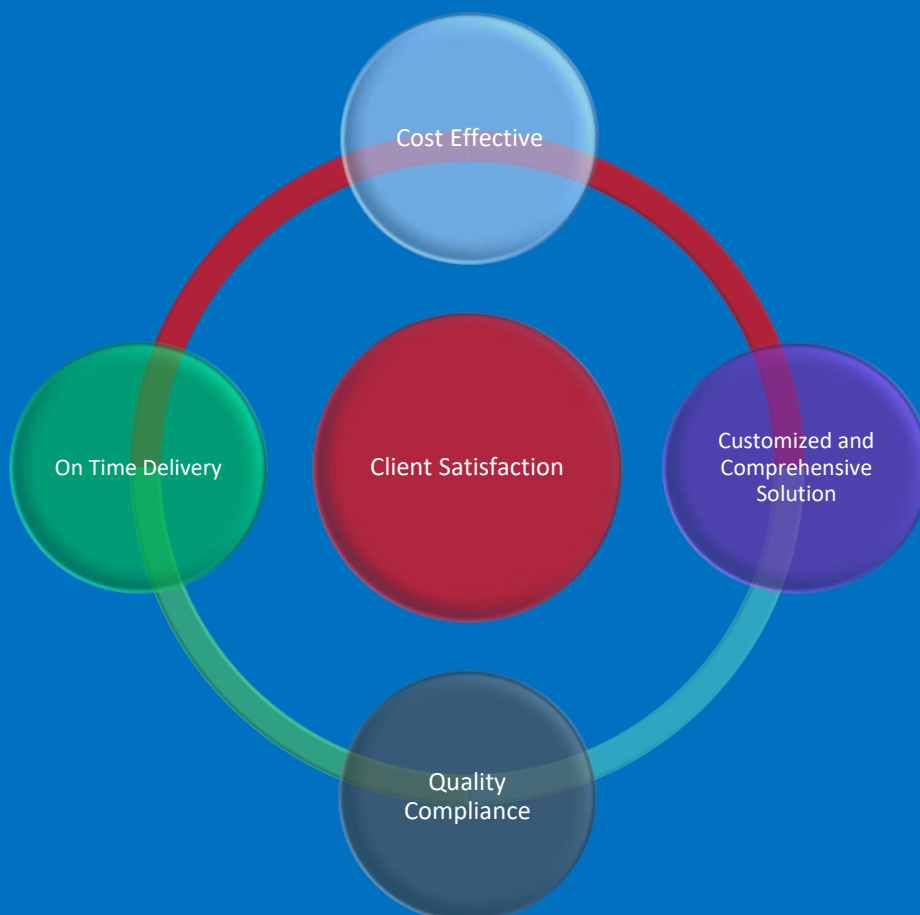
PROCESS ENGINEERING  
AUTOMATION  
INSTRUMENTATION

# ABOUT US

ADB offers pharmaceutical companies and a broad spectrum of other industries strategic solutions, systems, and advanced technologies. We engineer state-of-the-art process equipment and implement automation across diverse processes, fostering economic and environmental sustainability. This approach results in improved efficiency and the delivery of significant value to our clients.

ADB aspires to provide our customers cost effectiveness, safety, and sustainability by means of an integrated understanding of their requirements and needs, our integrated methods/process engineering solutions based on our multidisciplinary competencies and experience, by the function- and application-oriented design and manufacturing of our process systems, our demanding project realization times kept by means of efficient technological solutions, and our tightly organized project management maximum financial and technical project safety.

# WHY US



## VISION

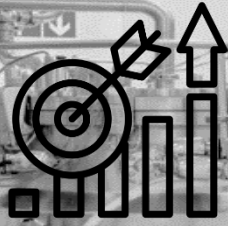
ADB aspire to be at the forefront of the global industrial landscape, delivering distinguished solutions and contributing to our clients' growth. We strive to boost the credibility and prosperity of our clients through forward-thinking, diversified systems, and equipment offerings. We endeavor to be the driving force in the global industrial sector, providing outstanding solutions and supporting our client's expansion. With an unparalleled focus on client satisfaction and adept project management, our mission is to inject innovation and creativity into all our engineering endeavors.







**Optimized Design Engineering**



**Planning**



**Process Engineering**

## ENGINEERING FOR BETTER SOLUTIONS

### ENGAGED CONVERSATION

Your vision is at the heart of our process road map. Through proactive conversation and the sharing of ideas, we pinpoint essential elements for performance and assess your needs and analyze your requirements can be replaced with evaluate your needs or examine your demands.

### STRATEGY AND PRECISION DESIGN

Our team of meticulously chosen professionals strategizes and creates your project with the utmost precision. We offer innovative turnkey solutions that you can trust.

### MANUFACTURING PROCESS

Our cutting-edge manufacturing methods incorporate industry-leading techniques and expertise acquired over time.

ADB provides its customers with development, implementation, and continuing service from a single source. All vessels are made out of stainless steel and can be supplied as stand-alone equipment or as automated process units delivered as fully-functional modules installed on-site that include: agitators, homogenisers, metering and regulating technology, control units, valves and pipe connections. Options for hazardous environments are also available. Our products are in accordance with ASME and as per client requirement.





**Manufacturing with Safety**

**After Sales and Services**

**Automation**

**Qualification & Validation**

## **WE ARE ENTRUSTED WITH YOUR PRODUCT**

We measure our performance by your satisfaction and trust.

We don't simply complete tasks, prioritize excellence and unwavering commitment to deliver intelligent solutions that create lasting value.

Using state-of-the-art technologies in combination with our tried and tested project management system gives us the tools we need to process all necessary tasks with success. ADB understands compliance with national and international norms and standards as self-evident, along with fulfilling requirements according to GMP and FDA directives.







## **ENGINEERING FOR BETTER SOLUTIONS**

### **BIOPHARMA VACCINES**

- Cell Culture, Microbial, Bio-Enzymes, Viral-Bacterial Human-Veterinary.

### **STERILE FORMULATIONS**

- Solutions, Suspensions, Emulsions, Gels for injection.
- Ampule, Vial and Lyophilizer line.
- Parental-Oncology/General/Complex Injectable.

### **MDI-DPI**

- Dry Powder inhaler.
- Pressurized metered dose inhalers nebulizers.



## **SOLUTION AND SUSPENSION PREPARATION**

## **CREAMS, OINTMENTS & SUSPENSION PLANTS**

## **SYRUP PREPARATION VESSELS AND VESSEL SYSTEMS**



## BIOPHARMA | VACCINES

As innovative, novel biologics transform the biopharmaceutical market, improved processes and technological developments are likewise changing the future of manufacturing. ADB provides better product and services to help overcome these challenges.

We provide a complete range of solutions from manufacturing to filling from R & D to volume makeup and from upstream to downstream process, fulfilling all your requirements with optimization of process and user friendly operations.



- Upstream bioprocess vessels for Media /Buffer preparation, Feed hold, Serum Vessels
- Downstream processing – Harvest Vessels, Pooling Vessels, Buffer preparation, Purification Vessels
- Lab Scale to Production Scale Fermenter
- Lab Scale to Production Scale Bioreactor
- Bio-kill/ Decontamination systems - Continuous & Batch
- Transfer sterile filtration skids with Integrity testing
- TFF/ Cross flow concentration Skids
- Blending/ Formulations vessels
- Product feed vessels for filling machine
- CIP systems – Mobile/ Centralized
- SIP systems – Integrated/ Standalone
- Temperature control units (TCUs)





## STERILE APPLICATION

Sterile formulation is a critical aspect of pharmaceutical and healthcare manufacturing, ensuring that products are free from harmful microorganisms and safe for patient use. It involves a highly controlled process, stringent regulations, and continuous quality control measures to maintain sterility from production to the patient.

- Manufacturing/ Compounding vessels
- Holding/ Filtration vessels
- Filtration skids with Integrity testing
- CIP systems
- SIP systems
- Integrated suites
- Buffer Vessels for all filling lines
- Neutralization systems/ Inactivation systems
- WFI coolers
- Clean steam sampler
- Temperature control units (TCUs)



## MDI-DPI

Metered Dose Inhalers (MDIs), Dry Powder Inhalers (DPIs), and Nebulizers are commonly used devices for administering medication to individuals with respiratory issues.

- Mixing/ Compounding Vessel
- Homogenizing Vessel
- Integrated suite
- API charging bowl/ Drug addition vessel
- Inbuilt or Standalone CIP system





## **MOBILE AND FIXED MIXING VESSELS FOR SOLUTION AND SUSPENSION PREPARATION**

Vertical cylindrical vessels designed as mobile units. Each vessel is designed individually, according to the customer's requirements, applied technology, and the process itself

## **CREAMS, OINTMENTS, SUSPENSION PLANTS**

Whether or not your process requires sterile conditions, powder and liquid ingredients must be introduced under contained conditions or you simply need a high quality performing mixing & homogenizing system under vacuum. Our designs allow configuring of mixing & homogenizing equipment, ranging from vacuum processing to processing under the most stringent sterile and toxic conditions. Various building blocks for CIP and SIP can be chosen to complete the solution to suit your needs. A wide choice of mixing tools, high-speed dissolvers, and homogenisers with various FDA sealing concepts are available



## **REACTORS AND SYRUP PREPARATION VESSELS AND VESSEL SYSTEMS**

Syrup and suspensions are typically produced under the same high-quality conditions as applied for sterile processes. Production plants must adhere to strict technical and regulatory requirements; the current GMP guidelines must be taken into consideration as well as the national and international applicable standards. A consistent plant concept with reliable detail solutions is an indispensable foundation for achieving repeatable high product quality. If these prerequisites have been fulfilled through a high-performance process plant, safe and reliable production is guaranteed

## **INTEGRATION OF PROCESS VESSELS /COMPLEMENTARY PROCESS SYSTEMS**

Our systems optimize these operations, which are vital to a final solid- or liquid-form pharmaceutical process. We provide a range of manual and automated preparation and dosing equipment, creating systems designed to optimize the dosing of ingredients.

# INTEGRATED SOLUTIONS

To guarantee the uniform excellence of our products, we incorporate high-precision elements alongside a completely automated and intelligent control system, complemented by a comprehensive cGMP documentation package.

## Design + Integrated

PFD and P & ID development

3D Modelling

Plant equipment layouts

LEAN SIX SIGMA and customized

Design

Flexible and Modular

## Line of Business

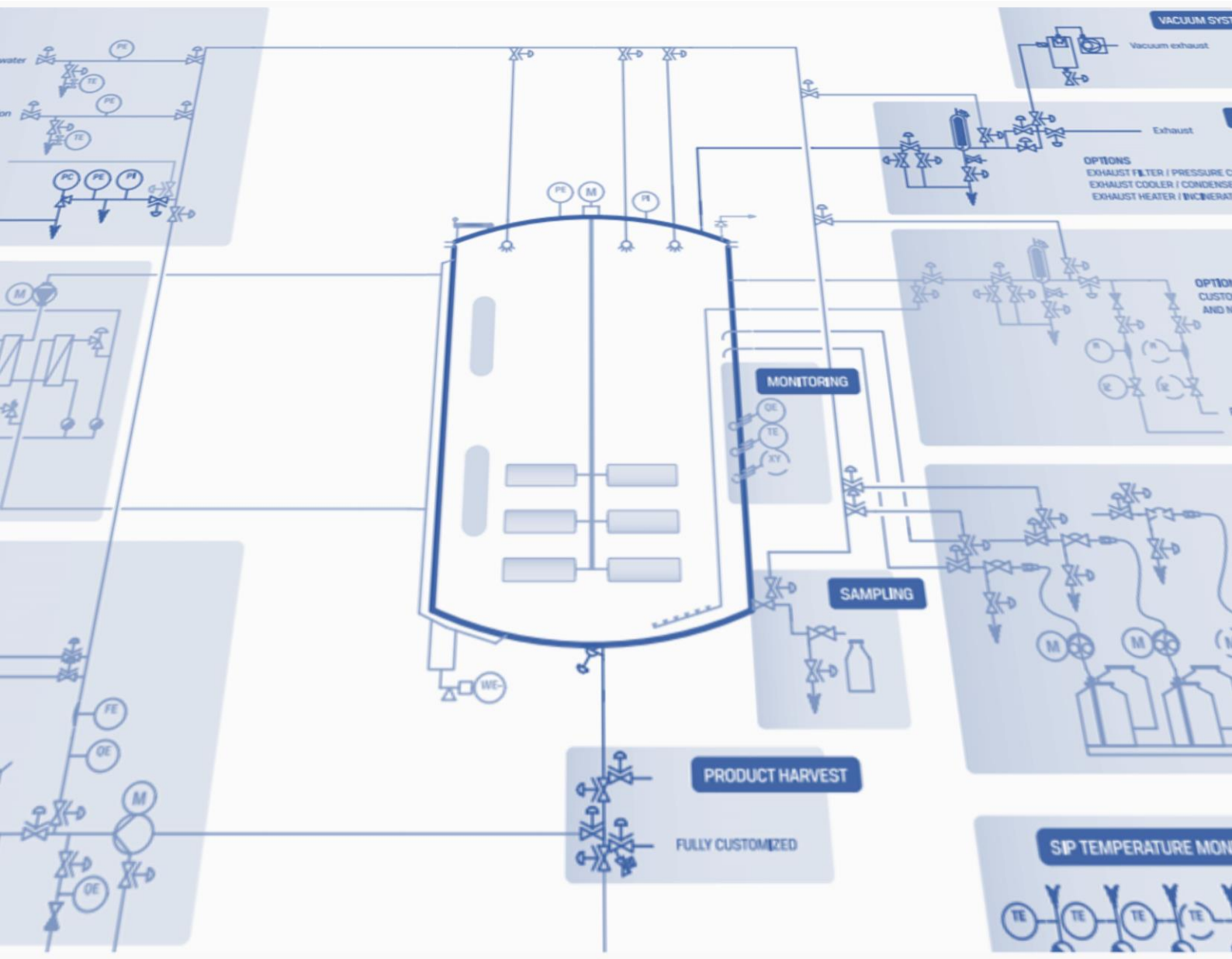
Biotechnology

Pharmaceuticals

Chemicals

Food

Beverage





# EXPERTISE

## GUIDELINES, STANDARDS, QUALITY CONTROL, DOCUMENTATION, TESTING

ASME BPE

GAMP

cGMP, FDA, MHRA, WHO

21CFR Part 11 compliance

UL

EHEDG

CE

ATEX/ IECEX/ EXd/ EXi/ Exe/ FLP

Non-Destructive Testing

Weld Seam Documentation

Qualification (DQ, IQ, OQ)

Quality Management System According to ISO 9001:2015

Our Quality Management System Ensures the full of traceability material

Used Including the certificates.

FAT

SAT

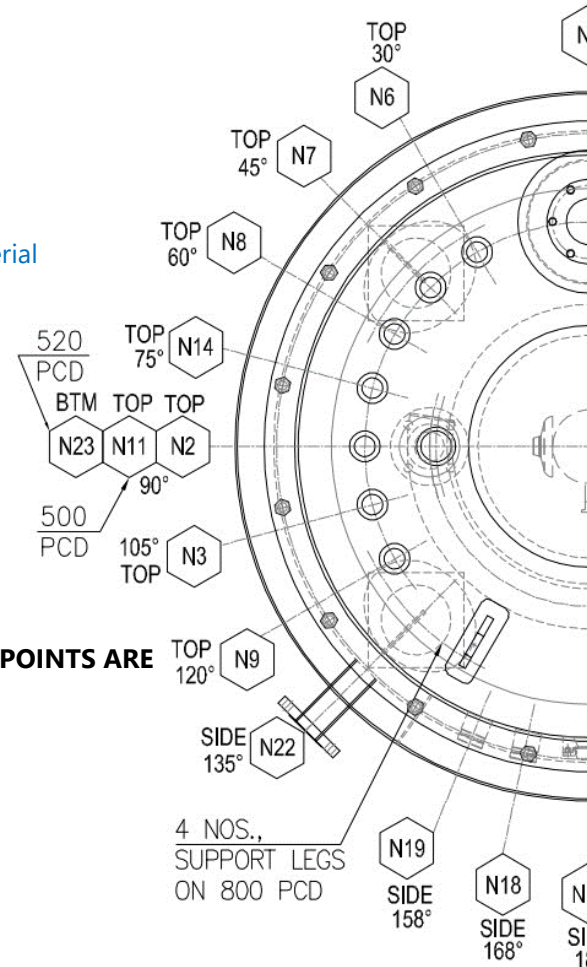
Surface Roughness Measurement

Electro-polishing

Passivation

### FOR PROJECT PLANNING AND ENGINEERING THE MAIN FOCUS POINTS ARE

- Preliminary design
- Support in approval planning
- Preliminary planning and layouts
- Selection/dimensioning of process equipment
- Preparation of tender documents for process plant
- Layout planning and detailed coordination/clarification
- Design of pipe layout and instrumentation
- Arrangement of components
- Calculation of material requirements and technical specifications
- Configuration and dimensioning of instrumentation and control equipment
- Technical description of the processes
- Quality assurance and quality control
- Monitoring of time schedules
- Cost control
- Supervision of construction and installation work
- Technical support for production
- Process optimization and Documentation



# EQUIPMENT QUALIFICATION

We employ a qualification documentation system to oversee commissioning tests (FAT-SAT) enhance non-conformity handling, simplify and expedite reporting procedures (review workflow, protocol endorsement reports), and establish uniform test protocols.

We employ a qualification documentation system to oversee commissioning tests (FAT-SAT) enhance non-conformity handling, simplify and expedite reporting procedures (review workflow, protocol endorsement reports), and establish uniform test protocols.

## Design Qualification (DQ)

The test and verification needed for completion during commissioning are detailed in the equipment's qualification plan (EQP), which must receive approval from the end user IQ & OQ activities.

## Installation Qualification (IQ)

The documented process of ensuring that equipment or system perform as expected throughout their projected operational ranges, involving an interactive SOP and culmination in the completion of IQ/OQ protocol upon meeting the prescribed SOP criteria.

## Performance Qualification (OQ)

Performance Qualification (PQ) team possesses the necessary technical expertise and qualification background to enable a smooth transition to the customer for the commencement of performance Qualification risk. (PQ)



## Material Traceability

The documentation for your system begins before the first drawing is generated or the first welding arc is struck, material traceability is established with purchase and receipt inspection of materials and is systematically maintained throughout the manufacturing and assembly process.



# EXPERIENCED PROFESSIONALS

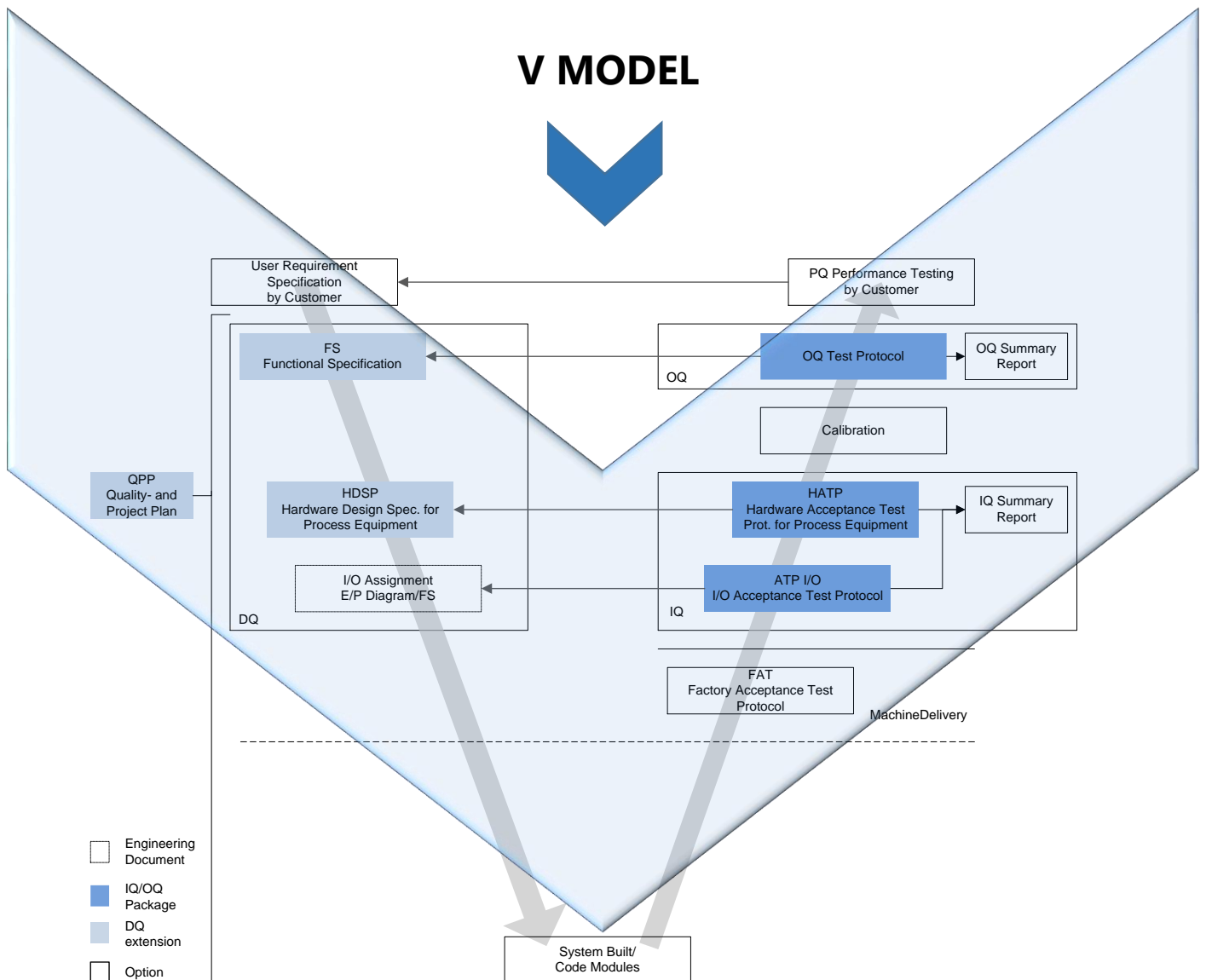
Many different processes take place during the fabrication of biopharma and Pharma equipment's. Several methods are used to document that the equipment has been equipment designed, fabricated, inspected, assembled and tested appropriately. These includes,

PMI Testing,

Borescope inspection and video capabilities.

Inspection and welding records as per QAP.

Pre and C-FAT



# AUTOMATION ENGINEERING FOR BETTER SOLUTION

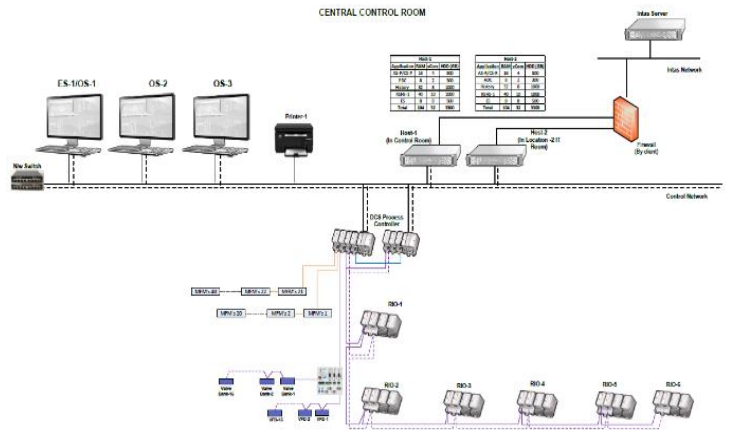
**In-house control Panel Manufacturing & Software programming-PLC/PCS/DCS/SCADA**  
 OPC driven system with remote connectivity and redundancy.

SCADA software that is compatible with OPC technology supports seamless 'Plug & Play' communication and offers features-rich GAMP Compliance software services.

Instantaneous data input for manufacturing execution system and timely notification of alarms and events.

Completely customized and upgraded software's, scalable to meet your needs, offering a unique level of customization and flexible features, with ability for local operations via Human interface (HMI) or industrial PC (IPC).

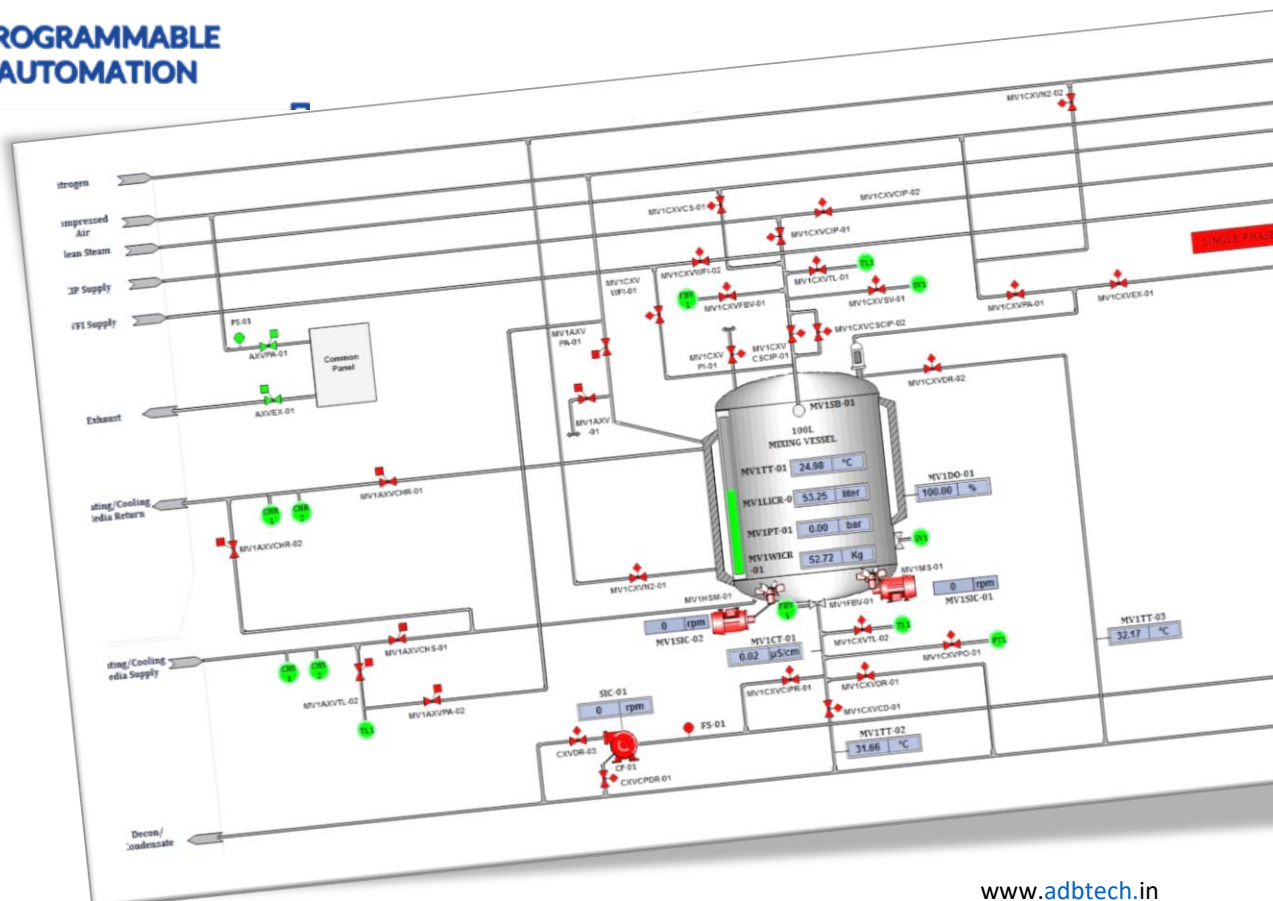
Provided through a centralized platform for historical data storage and batch reporting.



- [Systems Compliance](#) (e.g. 21CFR11)
- [Interfaces](#) (OPC, B2MML)
- [Plant Integration](#) (ISA S95.01 & 02)
- [Computer Validation](#) (GAMP5)
- [Batch Control](#) (S88.01 & 02)
- [Control System Security](#) (ISA S99)
- [Industrial Fieldbuses](#) (IEC 61158)



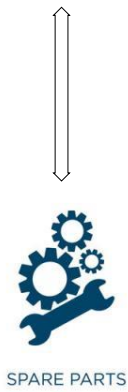
**PROGRAMMABLE  
AUTOMATION**





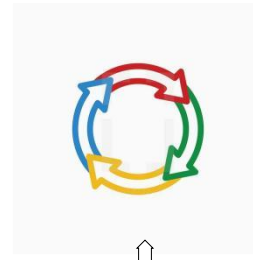
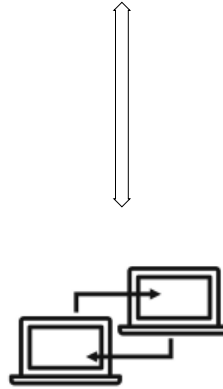
# AFTER SALES SERVICE SUPPORT FOR BETTER PRODUCTIVITY

Immediate Spare Replacement



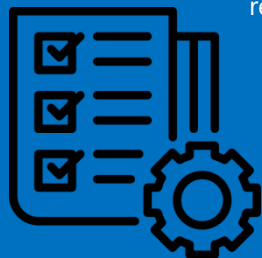
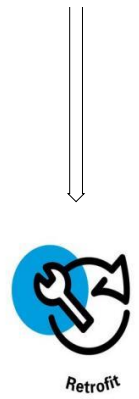
Quick telephonic Support

Safe Remote access in compliance with 21 CFR Part 11



Process and Instrumentation Support

Retrofits and extension for improvements



Maintenance Contract for reliable and cost effective plant planning



Onsite and Online Services

Recommended Spare Part List



## Services

- Automation & System Integration
- Onsite Orbital Welding
- Installation & commissioning
- Qualification & Validation
- AMC
- Providing EP & Passivated SS 316L, SS 304 Piping and fittings Materials.

## PIPING INSTALLATION:

- Installation planning
- Piping and Orbital Welding
- Quality Control/Documentation
- Commissioning Services

# ENGINEERING FOR SUSTAINABLE SOLUTIONS

Discover eco-friendly engineering solutions that prioritize sustainability and environmental responsibility. These products and services contribute to a greener future while maintaining performance and efficiency.

## OUR VALUES

Excellence

Integrity

Passion

Trust



*Connect with us.....*

# THANK YOU ➤



Engineering for Better Technology

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