MARKETING NETWORKS:

HEAD OFFICE:
Survey No.423, Sub Plot No. 9 & 10,
Mahagujarat Industrial Estate
Near Moraiya Bus Stop
Village: Moraiya, Tal. Sanand
Dist. Ahmedabad – 382 213, Gujarat

REGIONAL SALES MANAGER
Tel No. 098795 11807 / 97277 35223
Mobile No. 098245 04849
Email: ppe@pharmatechprocess.com

NORTH:
Pharmatech Process Equipments

REGIONAL SALES MANAGER
Mobile: 09350315877
E-mail: sanjay.sales@pharmatechprocess.com

SOUTH:
Pharmatech Process Equipments
4 – 1 – 1008/8, 2nd Floor,
Bogulkunta
Hyderabad – 500 001

REGIONAL SALES MANAGER
Tel. No. 040-247557702/24758026
Fax No. 040-24757808
Mobile: 098490 10050 / 092461 50249
Email: jacobcmc@gmail.com

EXPORT OFFICE:
Pharmalab India Pvt. Ltd.
"Kasturi" Sanghvi Estate
Govandi Station Road
Govandi (East)
MUMBAI - 400 088

Tel. No. 022-6622 9900
Fax No. 022-6622 9800
Email: pharmalab@pharmalab.com

PERSONALIZED SOLUTIONS

Pharmatech
Innovative Processing solutions

Pharmatech Process Equipments
Survey No.423, Sub Plot No. 9 & 10, Mahagujarat Industrial Estate,
Near Moraiya Bus StopVillage: Moraiya, Tal. Sanand,
Dist. Ahmedabad-382 213, Gujarat. Tel No. 098795 11807 / 97277 35223
Email: ppe@pharmatechprocess.com Website: **www.pharmatechprocess.com**

ISO 9001 BUREAU VERITAS Certification

PHARMALAB UNDER LICENCE

Pharmatech
Innovative Processing solutions

Technology that performs

www.pharmatechprocess.com

30 YEARS OF INNOVATIONS

Pharmatech is a subsidiary of the Pharmalab Group. The company has significantly contributed towards the growth of the Pharmaceuticals industry by investing in innovative technology and equipment designed to augment efficiencies and profitability.

We offer turnkey solutions for Liquid Processing Plants with piping and automation systems. These comprehensive solutions find application in Pharmaceutical, Biotech, and Cosmetic industries.

The solutions that our clients receive conform to national and international codes & standards . We can offer you the complete Plant Designing, Detail Engineering, Manufacturing, Testing, Supply, Installation, and Validation of Pharma and Biotech Automated Liquid Processing Plants as per URS and in strict compliance with cGMP, USFDA, ASME (BPE), "CE" & EHEDG guidelines.

More than 150 motivated and highly educated employees follow the company's value, based on our clients requirement's

- **Design**
- **Quality**
- **Performance**
- **Reliability**
- **Validity**

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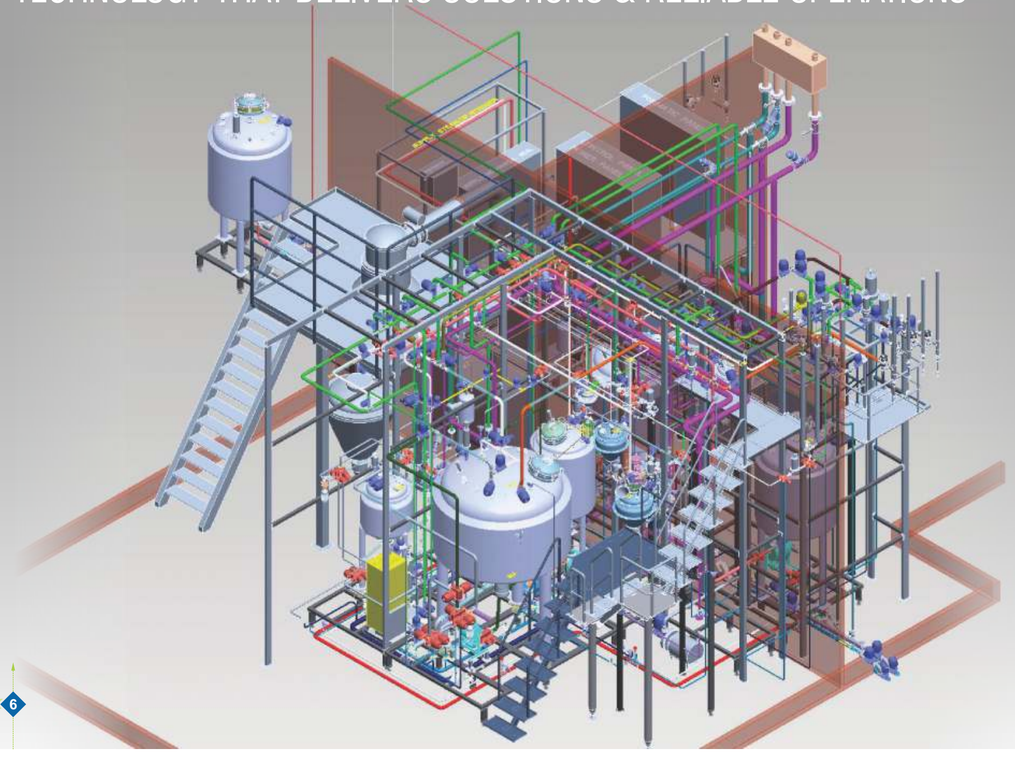
TECHNOLOGY THAT DELIVERS SOLUTIONS & RELIABLE OPERATIONS



“EVERY PROJECT IS CUSTOM MADE AND EVERY SOLUTION IS EFFECTIVE”

“PHARMATECH INNOVATION REFLECTS IN EVERY SOLUTIONS”

RANGE OF OUR PRODUCTION

- Liquid Oral, Syrup & Suspension Plants
- SVP & LVP Parenteral Plants
- Ointment / Cream / Lotion Plants
- Soft Gelatin Plants
- CIP / SIP Units
- Aseptic Pressure & Fillings Vessels
- RO/WFI Storage & Distribution Systems
- API Plant Equipments
- Fermentors / Bio-Reactors & Bio-Processing Equipments
- Sterile Heat Exchangers
- Turnkey Liquid Processing Pharma Plants

ASEPTIC SYRUP PROCESSING SYSTEMS

ONE - STOP - SOLUTIONS

"We offer turnkey solutions to our customers in the Pharmaceuticals industry. Our comprehensive services cover all aspects of the solutions from Conceptual design to Implementation and Automation:

Pharmatech offers high tech process solutions that are customized to your specific needs and aimed at improving your process systems. We offer high-level efficiency while staying within the boundaries of the project requirement and complying with all cGMP standards.

Backed by decades of experience and well qualified team of experts; we are India's leading engineering company, offering services for Pharma & Biotech Automated Liquid Processing Plants.

RANGE OF OUR SERVICES:

- Study the process requirements in depth
- Providing conceptual design
- PFDs & P&ID for process & utilities
- Electrical Load Lists
- Instrumental Index, Instruments specification
- Equipments specification Data Sheets
- Equipments Layouts
- Piping Layouts & Isometrics
- Piping & Valves specification sheets
- Sterility & cGMP requirements study
- CIP & SIP Loop Diagrams
- GA & Fabrication Drawings
- 3D & Model Drawings
- FDS, Wiring/Pneumatic Diagrams
- DQ, FAT, IQ, OQ Documents
- Quality Fabrication
- Factory Acceptance Test
- Site Works
- Service Support

LIQUID MANUFACTURING

ASCEPTIC INJECTABLE PROCESSING SYSTEMS

SALIENT FEATURES

- Completely compatible with Insitu CIP / SIP
- Aseptic sampling facility.
- Zero Dead Leg Flush Bottom Diaphragm Valve.
- State of the art bottom Entry Magnetic Stirrer / Homogenizer.
- Food Grade gaskets in compliance with FDA regulations.
- Sterile Air/Gas Purging & Air Vent Systems.
- Vessels made with AISI 316L with Active surfaces, Electropolished to Ra <0.5 Micron.
- Vacuum Powder Addition System.
- Design in compliance with URS / ASME Sec. VIII Div. I / CE / PED-97 guidelines.
- Automation in compliance with 21 CFR & GAMP5 norms, SCADA provision.
- Documentations like DQ, FRS, FAT, DQ & IQ Protocols.

MIXING AND HOMOGINIZING TECHNOLOGY

OINTMENT, CREAMS & EMULSIONS

Pharmatech's “VISCOMILL” is suitable for both Sterile and Non-Sterile production of ointment, creams & emulsions.

Features:
Unique Contra-Rotating stirrer with bottom mounted homogenizer with Inbuilt product re-circulation characteristics Hydraulic Lifting of top Cover with Stirrer which facilitates the cleaning - validation after the CIP
Teflon Scrapper with outer Low Shear Anchor Stirrer.
Can be offered in Lab Scale - Pilot Scale - Production Scale

System control range from simple, manual push button control to fill programmable logic controller (PLC) based SCADA options. The System conforms to latest 21 CFR-11 & GAMP 5 standards

Transfer Pump and line up to fill machine.
Inbuilt hot water / steam generator for Jacket heating of Mixing Vessel.
PLC based automation system with SCADA connectivity.
Inter-connecting Aseptic Pipe, Valves & Fittings.
Inbuilt Vacuum Transfer System for Oil & Water Phase.

Design with consideration to reduce the validation requirements

Features:

- Fully drainable crevice free design, no dead leg.
- Minimization of product losses using Block Valves.
- Flush mounted tank sanitary fittings, Steri-connect.
- Suitable for Inline CIP/SIP .
- Use of Lobe / Air operated Diaphragm Pump.
- Use of Transfer Panel.
- Use of Blender - Homogenizer.
- System control range from simple, manual push button control to fill programmable logic controller (PLC) based SCADA options.
- The system conforms to latest 21 CFR-11 & GAMP 5 standards.
- Transfer Pump and line up to fill machine.
- Inbuilt hot water / steam generator for Jacket heating of Mixing Vessel.
- PLC based Automation System with SCADA Connectivity.
- Inter-connecting Aseptic Pipe, Valves & Fittings.
- Inbuilt Vacuum Transfer System for Oil & Water Phase.

REACTORS - CRYSTALLIZERS

ACTIVE PHARMACEUTICAL INGREDIENT

API SYNTHESIS

Our Reactors are designed with minute details for top most performance, precision and quality in accordance to the latest cGMP standards and with severest hygienic and Safety requirements.

- Efficient heat transfer design with Jacket/ Limpet / Dimpled Jacket / Internal Coil.
- Supported with Heat Exchanger. Designs like Shell & Tube, Evaporators/Reboilers, Condensers etc.
- Sterile Application Reactors with provision to mount Isolator/Charge point valve and material transfer under Isolation.
- Design as per ASME Sec. VIII Div.1 and other International Design Codes.
- Agitation Systems to suit the required performance

Externally Mechanical polished and Internally Mechanical & Electropolished as well as Chemically cleaned and passivated

SEMI TURNKEY SOFTGEL PLANTS

Pharmatech design and deliver Softgel process equipment for Pharmaceuticals, Nutraceutical and Cosmetic products

The Softgel (Gelatin) capsule is a one piece, hermetically sealed shell wall filled with oils and non-aqueous liquids, plus solids in a paste or solution form

RANGE OF PROCESS EQUIPMENT

- Gelatin Melter / Cooker
- Gelatin Feed Tanks (Jacketed)
- Raw Gelatin Feed Tanks
- Platform with Load Cells
- Medicaments Mixing & Dispersing Units
- Homogenizing Vessel with hydraulic top lid facility
- Medicament Inline homogenizer & lobe pump for transfer
- Utility System for hot water & Vacuum system for de-aeration in Cooker
- Color Mixing & De-aeration Skid Mobile
- Mobile Auto CIP System

CIP UNITS

CLEANING IN PLACE SYSTEMS

Clean - in - Place System

- You can achieve essentially continuous use of your processing equipment by minimizing system shut down for cleaning.
- Efficiently minimizes potential contamination Sustains Sanitary Integrity.
- A CIP System is close looped where sanitary conditions are easier to maintain. Thus, maintenance costs are reduced.
- Process, Design, Controls and Software are customized to your safety criteria.
- CIP Systems are used wherever the product must be kept pure and residue will not be approved in next product being processed.

Pharmatech Systems are designed to meet or exceed 3A Sanitary standard and cGMP guidelines

Applications:

- Pharmaceuticals
- Chemicals
- Food / Dairy
- Biomedical
- Veterinary
- Cosmetics
- Fermentation
- Bio-Reactors

Different Designs are offered as per client needs

One Tank - Single use System
Two Tank - Detergent & Rinse System
Three Tank - Detergent and Multi rinse system
CIP - Mobile

Latest Control System, Hardware and Software Flow Rate, Temperature, Pressure, Level, Conductivity, pH Sensor, Control Parameter for reliable system.

SIP & COMBO UNITS

STERILIZATION SYSTEMS

SIP stands for Steam-in-Place and it's a common operation used in Food, Beverages and Biotechnology as well as Pharmaceutical Industries to kill organism using thermal energy and condensing steam to sterilize the system.

Cleaning in Place (CIP) and Sterilization in Place (SIP) are systems designed for automatic cleaning and disinfecting without the need of major disassembly and assembly works.

SIP guidelines for sterile Process Systems:

1. Perform Clean-In-Place (CIP) operations before SIP operations to remove processing soils.
2. Confirm steam supply header presser and temperature to ensure a saturated steam supply.
3. Introduce saturated steam supply as high as possible in the system to push out ambient system gases through monitored process low points.
4. Install low point steam trap blocking valves and temperature sensors to measure temperature at process low points.
5. Use monitored high point air bleeds to ensure complete elimination of air from the processing system.
6. Avoid parallel steam paths as pressure differences during the air removal stage can prevent proper steam exposure and will result in sterility failures.
7. Plan SIP operation to have steam flow and process flow in the same direction to take advantage of the existing process piping pitch and support process drainability & avoid hoses, dead-ends and non-drainable low points.
8. Include a time delay following saturated steam to allow system components to achieve the desired set point temperature.
9. Provide a means of active steam flow to the process during SIP hold to ensure required thermal treatment has been achieved.
10. Finally, protect the sterile process boundary as the condensate is drained from the system.

SIP
Steam-In-Place
Sanitization-In-Place
Sterilization-In-Place

RO / WFI STORAGE & DISTRIBUTION

CLEAN MEDIA STORAGE & DISTRIBUTION SYSTEMS

RO / WFI Storage & Distribution

Pharmatech has wide experience in Design, Manufacturing, Supply, Installation, Commissioning and Validation of WFI / Purified Water Storage & Distribution System, compliant with cGMP, USFDA, EHEDG, WHO & ASME (BPE) guidelines

WFI / RO Tank Salient Features:

- Electropolished to <0.5 Ra for all internal surfaces of vessels, pipes and components.
- Return Velocity Control to avoid Bio-film formation.
- Orbital welding of all joints with required Boroscopy of weld joints with weld mapping and As built system piping drawing.
- Sanitization / Sterilization facility with Inbuilt CIP/SIP with recording facility.
- End point Aseptic Cooler / Heater as required.
- Range of scope and activity for turnkey execution.
- Control / Distribution Unit (Skid).
- 100% Drainability.
- Water Parameters Measurement & Control.

FERMENTORS & BIO-REACTORS FOR BIOTECHNOLOGY INDUSTRY

"An Ideal Bioprocess Partner to find the solutions that suit your specific needs"

Pharmatech Bioprocess Solutions
Our Biotech division delivers Process Plants right from Upstream Process, Media Preparation, Fermentors & Bio-Reactors, Downstream Process Plant and Bio-Waste Deactivation System

Our expert team designs the Fermentation Plant in strict compliance to URS and International Code of ASME Sec. VIII Div.1 and ASME (BPE) to deliver efficient process outcome with optimized solution.

Out turn-key integrated plant with latest automation system is aimed to provide best yield to be validated in first trial of sterility test.

Area of applications:
Microbial Fermentation
Enzymes & Steroids
Microbial API
Monoclonal Antibodies
Antibiotics & Probiotics

Control Parameters:

pH	DO
Temp.	Foam
Feed	RPM
Pressure	Air Flow
SIP	CIP

Design Features:

- Fill Volume : 70 - 80%
- MOC : SS 316L
- Surface Finish : $<0.4\,\mu$
- Agitation Tip Speed : 5-8 M/s
- Aeration vvm : 1 to 2
- Heating/Cooling System
- Exhaust System
- Harvesting
- Inoculation
- Sterilization

20 L PILOT FERMENTOR

QUALITY ASSURANCE

PHARMATECH PROCESS EQUIPMENTS is committed to quality, integrity and excellence in all areas of business to the highest level of customer satisfactions.

Pharmatech's highly trained Quality Department maintains and enhances the quality of products, thus offering quality control and quality assurance. This practice makes sure that the end products or services meet the quality requirements and standards defined for the product or Services.