



Asia Pacific

Headquarter, Shanghai Office

No. 29, Jinwen Road, Zhuqiao Airport Industrial Park, Shanghai, China
E-mail: smp_info@morimatsu.cn
Tel: +86 21 38112058

India Office

438, Level 4 Dynasty, A wing, Andheri-kuria Road, Andheri(east) Mumbai, India(400059)
E-mail: smp_info@morimatsu.cn
Tel: +91(22)67869492

Japan Office

1430-8, Minobe, Gifu, 501-0413, Japan
E-mail: smp_info@morimatsu.cn
Tel: +01-50-323-0333

Europe

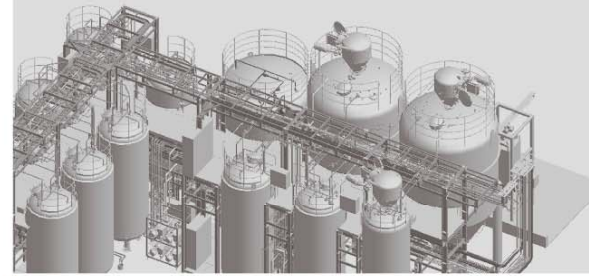
Headquarter, Stockholm Office

Danvik Center 28
131 30 Nacka Sweden
E-mail: info@pharmadule.com
Tel: +46 (8) 587 42 000

U.S.A

Headquarter, New Jersey Office

33 Bernard Street Branchburg NJ 08876 USA
E-mail: info@pharmadule.com
Tel: +1 (908) 722-6845



Process Solutions for Life Science and Consumer Product Applications

Preparation Systems



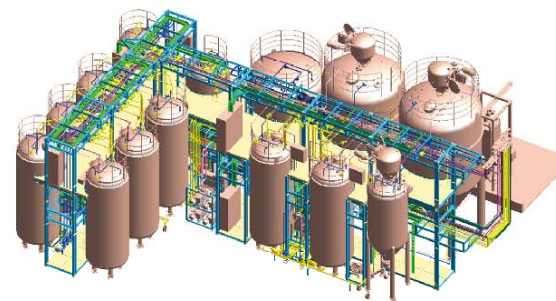


Morimatsu is a global leader in the delivery of modular preparation systems. With more than 800 units delivered, we continue to specialize in the design and fabrication of preparation system for many of the industry's most respected pharmaceutical innovators.

Our preparation systems have been widely specified for the manufacture of biopharmaceutical products, small volume injectables (lyophilized products, liquid microsphere, liposome, fat emulsion), and large volume injection (amino acid, fat emulsion), eye drop, contrast agent, oral liquid, etc. Our process design includes a guarantee of sterility, with minimum product loss, fully capable of CIP and SIP, easy operation and maintenance. We support our clients through FDA, EMA, WHO and other GMP validations with completely traceable documentation.

As a member of ASME BPE Main Committee and System Design Subcommittee, we know the latest industry developments and advanced technologies. At the same time we help to promote innovation within the industry by contributing our wide and deep experience acquired through years of design and fabrication.

Common Features



Advanced Design

Strict adherence to ASME BPE standards and ISPE Guidelines

Modular Concept

Improves project quality, facilitating globally project delivery and optimizing site installation

Professional Design Software

PDMS 3D software for easy design review guaranteeing no dead leg, minimum product loss, convenient and safe operation and maintenance

Reliable Data

Controls and automation for collecting data and keeping records of the production, cleaning procedure, and to generate production reports

Flexible Production

Utilizing recipe management for production, CIP and SIP, with automation programming that follows ISA 88 standards and meets batch production requirements



Asia Pacific

Headquarter, Shanghai Office

No. 29, Jinwen Road, Zhuqiao Airport Industrial Park, Shanghai, China
E-mail: smp_info@morimatsu.cn
Tel: +86 21 38112058

India Office

438, Level 4 Dynasty, A wing, Andheri-kuria Road, Andheri(east) Mumbai, India(400059)
E-mail: smp_info@morimatsu.cn
Tel: +91(22)67869492

Japan Office

1430-8, Minobe, Gifu, 501-0413, Japan
E-mail: smp_info@morimatsu.cn
Tel: +01-50-323-0333

Europe

Headquarter, Stockholm Office

Danvik Center 28
131 30 Nacka Sweden
E-mail: info@pharmadule.com
Tel: +46 (8) 587 42 000

U.S.A

Headquarter, New Jersey Office

33 Bernard Street Branchburg NJ 08876 USA
E-mail: info@pharmadule.com
Tel: +1 (908) 722-6845



Process Solutions for Life Science
and Consumer Product Applications

Biopharmaceutical Total Solutions



Biopharmaceutical Total Solutions

The expanding Biotech Industry requires strategic development planning to handle the growing global demand. New production technologies are emerging, providing increased yields and the need to redesign and debottleneck the manufacturing process.

Morimatsu has been supporting the Biotech Industry with specialty process equipment since the beginning and can offer a global team of experts to lead your project. Our international staff have spent +20 years of the careers in this field gaining rich and diverse experience to support projects all around the world.

We provide complete process solutions: From bioreactors and fermenters, through media/buffer preparation, harvest and purification, all the way to formulation, biowaste, and CIP systems. Our engineered solutions are designed to minimize product loss and are fully CIP/SIP capable, while being easy to install, operate and maintain. As the end-to-end solution provider from upstream through downstream, we can eliminate interfaces for easy project management and delivery.



Media Preparation 1



Cell Cultivation 2



Buffer Preparation 3



Harvest 4



Purification 5



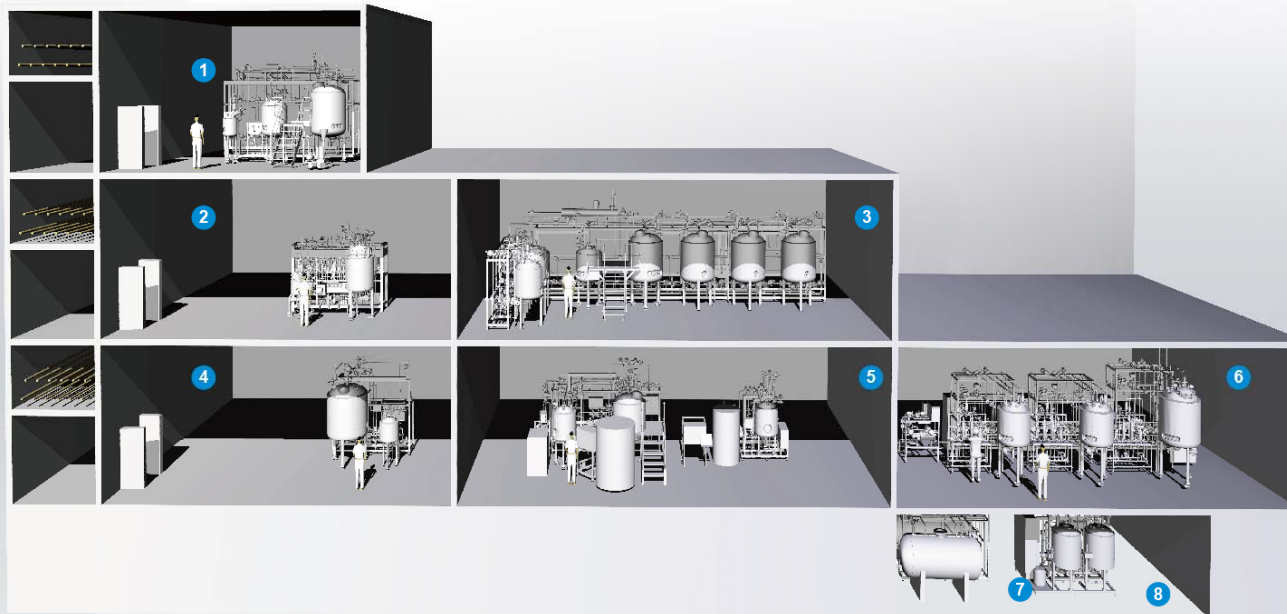
Formulation 6



Biowaste 7



CIP Station 8



Common Features

Design

- Designed in accordance with ASME BPE standards and ISPE guidelines
- Modular solution to improve project quality and optimize site installation
- PDMS 3D software, to facilitate easy design reviews while guaranteeing minimum product loss by eliminating dead legs
- Multiple powder adding and lifting solutions
- Flexible material transfer design (transfer panels, block valve manifolds)

Automation

- User-friendly man-machine interface for easy and convenient operation
- Programming to consider safety interlocks for the protection of personnel and product
- Programming based on PLC or DCS software, following the ISA 88 standard and meeting batch production requirements
- Complete and reliable data through electronic records of the production and cleaning procedure, generating production reports
- GAMP 5 and 21 CFR Part 11 compliant

Special Material Handling

Design and fabrication experience using special materials, including Super Austenitic Stainless Steel, Hastelloy, Titanium etc

Documentation

Fully traceable FDA, EMA and WHO GMP compliant documentation



Asia Pacific

Headquarter, Shanghai Office
No. 29, Jinwen Road, Zhuqiao Airport Industrial
Park, Shanghai, China
E-mail: smp_info@morimatsu.cn
Tel: +86 21 38112058

India Office
438, Level 4 Dynasty, A wing, Andheri-kuria Road,
Andheri(east) Mumbai, India(400059)
E-mail: smp_info@morimatsu.cn
Tel: +91(22)67869492

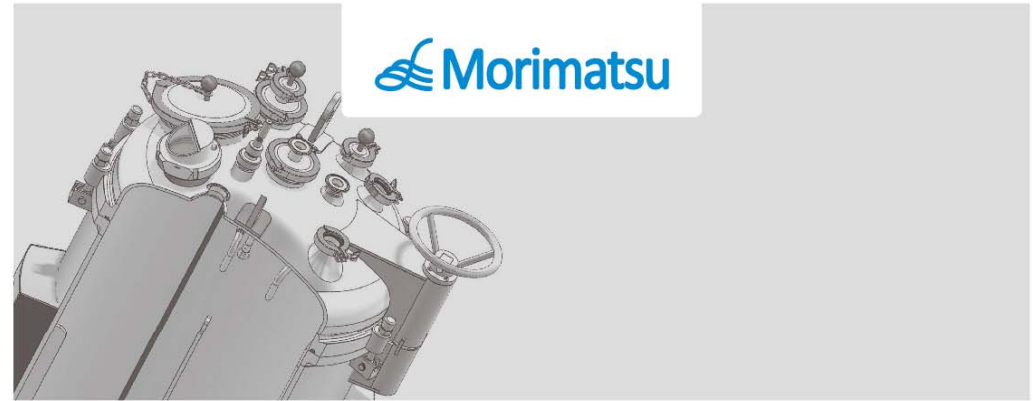
Japan Office
1430-8, Minobe, Gifu, 501-0413, Japan
E-mail: smp_info@morimatsu.cn
Tel: +01-50-323-0333

Europe

Headquarter, Stockholm Office
Danvik Center 28
131 30 Nacka Sweden
E-mail: info@pharmadule.com
Tel: +46 (8) 587 42 000

U.S.A

Headquarter, New Jersey Office
33 Bernard Street Branchburg NJ 08876 USA
E-mail: info@pharmadule.com
Tel: +1 (908) 722-6845



Process Solutions for Life Science
and Consumer Product Applications

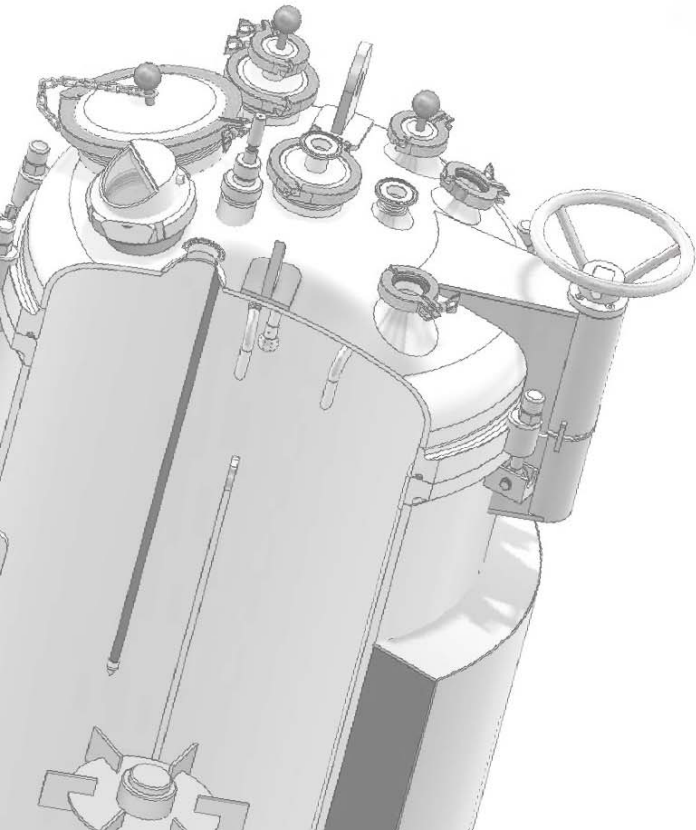
Sanitary Vessels



Sanitary Vessels

Morimatsu is a global leader in the design and fabrication of sanitary vessel. For more than a quarter century we have delivered cutting-edge technology, leading to Morimatsu's reference as the industry's "Tank Pioneer". We have delivered more than 10,000 sanitary vessel globally. Some of the world's most respected companies, like Amgen, Bayer, Novartis, Pfizer, P&G, Roche, Unilever, have chosen our vessels for their critical applications.

As a member of ASME BPE Main Committee and System Design Subcommittee, we know the latest industry developments and advances in technology. At the same time we help to promote innovation within the industry by contributing our rich experience acquired through years of design and fabrication.

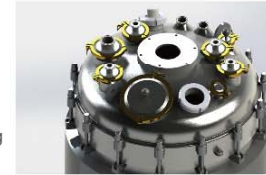


- Sanitary vessels from a few liters for lab-use to 200,000L production vessels

- Designed to ASME BPE standards, fully drainable with a guarantee of no dead legs

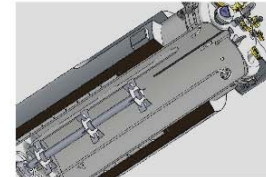
- Riboflavin testing to guarantee full cleanability

- Different spray ball configurations to fit different tank sizes and internal structures, ensuring full cleanability



- SolidWorks 3D software for easy design reviews providing convenient and safe operation and maintenance

- Complete calculation capability, including pressure and analysis calculation



- Various agitator designs (mechanical or magnetic) to match different processes

- Various jacket options (conventional, dimple, half pipe) for heating and cooling



- Mechanical and electrical polishing of internal surfaces to a roughness of 0.1 um; smooth and consistent external surfaces to a brush, mirror or 2B surface polish

- Appropriate insulation material to meet your operating requirements

- Capability to design and fabricate using special material (Super Austenitic Stainless Steel, Hastelloy, Titanium etc)

- Complete pressure vessel quality assurance system-can design according to ASME, JIS, GB code etc, and get PED, DOSH, MOM certification

- Fully traceable FDA, EMA, WHO GMP compliant documentation





Asia Pacific

Headquarter, Shanghai Office
No. 29, Jinwen Road, Zhuqiao Airport Industrial
Park, Shanghai, China
E-mail: smp_info@morimatsu.cn
Tel: +86 21 38112058

India Office
438, Level 4 Dynasty, A wing, Andheri-kuria Road,
Andheri(east) Mumbai, India(400059)
E-mail: smp_info@morimatsu.cn
Tel: +91(22)67869492

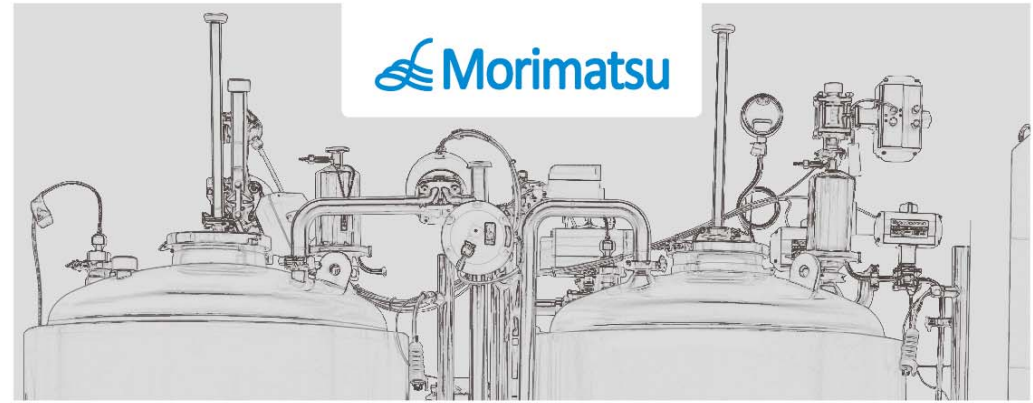
Japan Office
1430-8, Minobe, Gifu, 501-0413, Japan
E-mail: smp_info@morimatsu.cn
Tel: +01-50-323-0333

Europe

Headquarter, Stockholm Office
Danvik Center 28
131 30 Nacka Sweden
E-mail: info@pharmadule.com
Tel: +46 (8) 587 42 000

U.S.A

Headquarter, New Jersey Office
33 Bernard Street Branchburg NJ 08876 USA
E-mail: info@pharmadule.com
Tel: +1 (908) 722-6845



Process Solutions for Life Science
and Consumer Product Applications

Clean In Place



Clean in place



The Clean-In-Place (CIP) workstation is a comprehensive cleaning system integrating tanks, piping, valves, and instrumentation, through the use of automation to meet the user's specific cleaning requirements. It can automatically adjust time, PH, and temperature among other parameters while displaying images through use of a man-machine interface. This enables all operations to be recorded, simplifying the GMP validation for the user.

Common Features

- Designed according to ASME BPE standards, with a guarantee of full drainability and no dead leg
- Modular design to improve system quality and facilitate faster site installation
- Multiple configurations and portfolios available, fixed or mobile types, single or dual-tank systems, manual or automatic control, with or without heating mode
- All process parameters can be adjusted on user-friendly and easy-to-operate HMI
- Automatic preparation of cleaning detergent concentration by dosing pumps
- Automatic detection of cleaning results by conductivity measurement
- Automatic recording of all process parameter, process data and alarm information
- PLC or DCS automation programming capability, following ISA 88 standard to meet batch production requirement. User can adjust the formula to meet different process requirement.
- Fully traceable FDA, EMA, WHO GMP compliant documentation

CIP

