



woowonMIX

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We make mixing easier!

**mixing
technology**

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woowonMIX

Introduction

Woowon means #1 in the universe in Korean. Started in Seoul, Korea since 1984, Woowon keeps striving for a single target: We make a mixer our customers can trust. Regardless of your business size and whatever product you have, we make small to large capacity units, wherever mixing process is require including cosmetic, pharmaceutical, chemical, and food industries. Accumulated technical know-how and our philosophy to provide the best quality product at an affordable price led us to grow continuously with the success of our customers.



We make mixing easier!

mixing technology

History

1984 Company founded as Woowon Machine Manufacturing in Seoul, Korea
1992 Factory moved to Incheon, Korea
1994 Sold 302 sets of mixers / Made a first sale to China
1995 Made a first sale to USA
1996 Reached domestic market share over 80%
1999 Made a first sale to Japan
2000 600 sets of mixers sales record to more than 200 companies worldwide
2001 Acquisition of ISO 9001/2001 ISO 9001/2001
2002 Appointed as a Promising Export Firm by KOTRA
 (Korea Trade-Investment Promotion Agency)
 and SMBA (Small Medium Business Administration: a government organization)
2003 Factory moved to Sihwa Industrial Complex (Ansan, Gyeonggi-do)
2004 Corporation established as Woowon Machinery Co., Ltd.
2005 Awarded \$1MIL Export Tower by the Ministry of Commerce, Industry and Energy
2006 Acquisition of “S” mark, a safety certification from KOSHA
 (Korea Occupational Safety and Health Agency)

2007 Acquisition of UL certification / Patent pending (Liquid mixing impeller)
2008 2 Patents registered (Safety device for hydraulic lid lifter)
2009 Research and development center certification from KOITA
 (Korea Industrial Technology Association)
 Appointed as a Venture Business Company by the Government
 Appointed as a Inno-Biz (Innovative Business) enterprise by the Government
2011 Acquisition of ISO 9001/2011 (Quality Management) and ISO 14001/2011
 (Environmental Management)
2012 Acquisition of CE certification CE / FTA (Free Trade Association) exporter certification
 Awarded \$3MIL Export Tower by the Ministry of Commerce, Industry and Energy
2014 Awarded \$5MIL Export Tower by the Ministry of Commerce, Industry and Energy
2016 Acquisition of Canada CSA certification
2017 Acquisition of CSEL certification. (China Pressure vessel certification)
2018 Trademark Registration (USA, CHN, EU, THA, JPN)
2019 Awarded \$10MILL Export Tower by the Ministry of Commerce, Industry and Energy
2020 2nd Factory Extension



Poduct Line

Skin Care Cosmetic

Product
Skin, Lotion, Cream, Sun cream, BB cream, CC cream, Foam cleansing, Mask pack and etc



Color Cosmetic

Product
Lipstick, Mascara, Foundation, pencil, Eye liner, Eye shadow and etc



House hold goods

Product
Toothpaste, Shampoo, rinse, Hairdye, Cleaner and etc



Pharmaceutical

Product
Ointment, Cream, Gel product, Patch product, Gelatin, Injection, Syrup and etc.



Food

Product
Sauce, Beverage, Mayonnaise, Jelly and etc



Chemical

Product
Silicon, Adhesive, Paint, Raw materials and etc



Plant Engineering

Total Process Design and Plant Engineering

Woowon is a design and engineering company that can design the flow of material and product, and control the whole process of an automated production line. From Liquid-solid mixing and Solid-liquid mixing plants to Powder wetting processes and Emulsifying plants that have the main process of Mixing-Homogenizing-Dispersing. We design and manufacture all required equipment to handle various viscosity products in the cosmetic, pharmaceutical, food, and chemical industries.

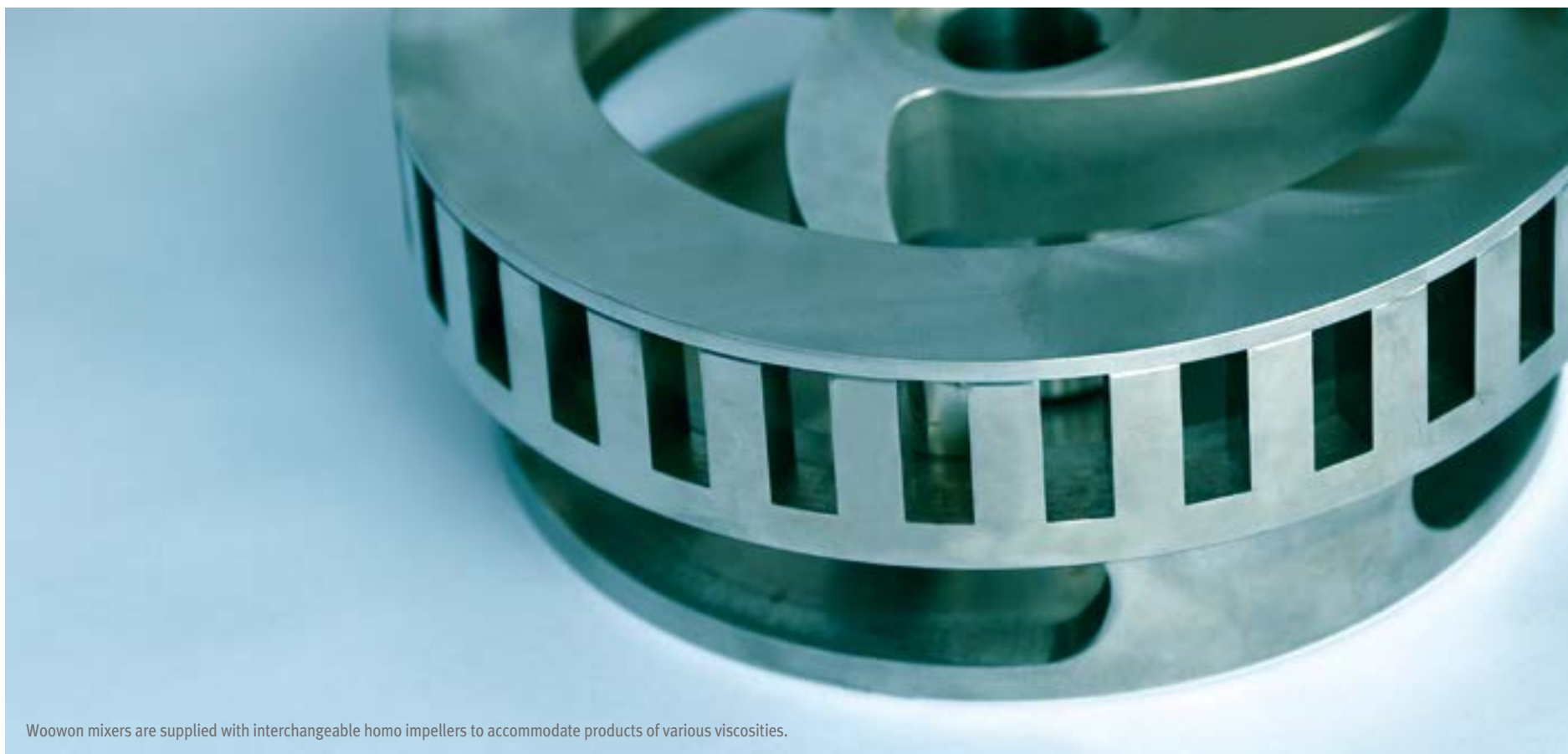


- Multi-volume mixers and service tanks are carefully positioned for the efficient flow of materials and operator traffic.
- Automatic raw material supply and weighing system
- Automatic product transfer and bulk storage, automatic filling system
- Automatic cleaning system of various configurations
- Maximize the capabilities of individual workers with a multitasking bench
- Expandable design considering future expansion facilities
- Automatic cleaning and sterilization system for CIP, SIP, DIP, etc.

Technology

Woowon Homogenizer

Woowon's designs and provides homogenizers to suit various conditions such as product characteristics, viscosity, particle size and so on. In addition, it is designed so that homogenizer of different designs can be easily replaced and used for optimum efficiency.



Woowon mixers are supplied with interchangeable homo impellers to accommodate products of various viscosities.

Woowon Homogenizer Details



Combi Homogenizer

- Flow direction from bottom to top
- Strong pumping force with high emulsifying ability
- Suitable for liquid & liquid mixing (ex. Creams and lotions)



Ultra homogenizer

- Flow direction from top to bottom
- Strong dispersion and shearing force
- Suitable for liquid & powder mixing (ex. BB cream and sun cream)



We provide Many Kinds of homogenizers that are easily interchangeable to handle different viscosities.



Liquid

Ultra Homo Mixer Batch Mixing System

Ultra Mixer series are a vacuum homogenizer. Main functions are homogenizing, emulsifying, mixing and defoamation. Mixing part that makes shearing force at high speed for homogenization and counter rotating scraper part that mixes the product at low speed. The heating, cooling, and vacuum pressure devices are designed to handle various products in the cosmetic, pharmaceutical, food and chemical industries.



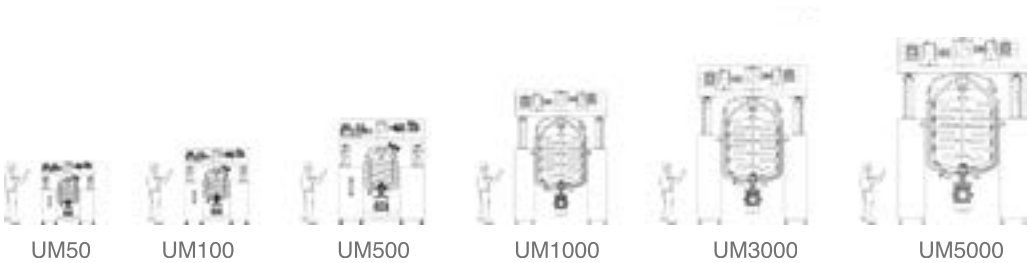
Features

- Internal vacuum homogenizing without external loop
- Counter-rotating paddle with scraper or spiral agitator
- Stainless steel product contact parts with mirror finish
- Heating and cooling vessel
- Lid lifter
- Vessel tilting for discharge

Applications

Creams, Lotions. Sun creams, Ointments, Beverages, Sauces and dressings, Salt solutions, Catalysts, Lacquers, Polymer emulsions

Homogenizing | Dispersing | Blending



Model	Max. useful volumn	Min. useful volumnl	Demension (L x W x H mm) Length
UHM 5	5L	3L	650 x 1,200 x 1,700 (2,000)
UHM 50	50L	15L	750 x 1,600 x 2,050 (2,850)
UHM 100	100L	30L	750 x 1,800 x 2,100 (3,000)
UHM 300	300L	90L	1,000 x 2,250 x 2,650 (3,850)
UHM 500	500L	150L	1,200 x 2,500 x 3,000 (4,400)
UKM 1000	1000L	300L	1,400 x 2,950 x 3,650 (5,400)
UHM 3000	3000L	900L	2,000 x 3,200 x 4,500 (6,600)
UHM 5000	5000L	1500L	2,350 x 3,550 x 5,200 (7,600)

Liquid

High Shear Mixer Batch Mixer with external circulation

The High Shear Mixer series are a vacuum pressure homogenizer with specially designed impeller and paddle agitator.

Main functions are homogenization, dispersion and CIP. External circulation of products brings increased quality of homogenization within a shorter period of batch time.



Features

- Internal vacuum homogenizing with external loop
- Counter-rotating paddle with scraper or spiral agitator
- Stainless steel product contact parts with mirror finish
- Heating and cooling vessel
- Lid lifter
- Vessel tilting for discharge

Applications

Toothpaste, Creams, Lotions, Sun creams, Ointments, Beverages, Sauces and dressings, Salt solutions, Catalysts, Lacquers, Polymer emulsions

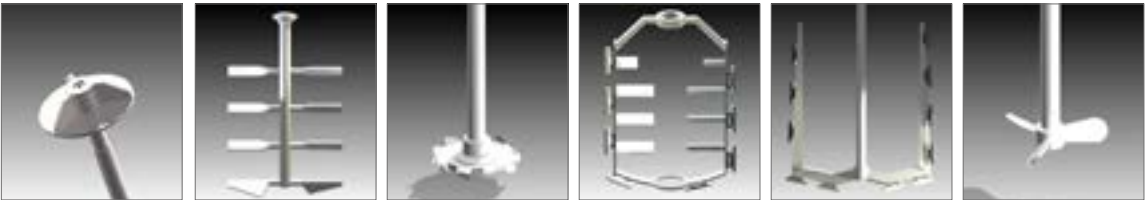
Homogenizing | Dispersing | Blending

Model	Max. useful volumn	Min. useful volumnl	Demension (L x W x H mm) Length
HSM 5	5L	3L	700 x 1,550 x 1,600 (2,000)
HSM 50	50L	15L	800 x 1,580 x 2,000 (2,650)
HSM 100	100L	30L	1,000 x 1,750 x 2,150 (3,150)
HSM 300	300L	90L	1,200 x 2,150 x 2,850 (3,870)
HSM 500	500L	150L	1,250 x 2,320 x 3,000 (4,100)
HSM 1000	1000L	300L	1,400 x 2,560 x 3,950 (5,300)
HSM 3000	3000L	900L	2,100 x 3,100 x 5,030 (7,030)
HSM 5000	5000L	1500L	2,560 x 3,800 x 6,100 (8,600)

Liquid

Custom Mixer

Woowon designs the custom mixers. Those are optimized for the product specifications and process characteristics based on the accumulated know how of impeller selection. The range we provide comprises from simple agitator that doesn't require temperature control to complicated planetary mixer using two sets of agitators that turn on offset shafts, while the mixing bowl remains stationary and creates very achieve maximum productivity.



Disk impeller / Paddle / Disper /
Scraper / Anchor scraper / Propeller

Combination Mixer

Homogenizer + dispersion with anchor scraper

- Homogenizing and dispersion at the same time
- Suitable for products that require homogenizing and dispersion

Dispersion + dispersion with anchor scraper

- Maximize dispersion force
- Suitable for high viscosity products such as powder



Planetary Disper Mixer

The planetary mixer performs both and rotating operation.
It is suitable mixing for high viscosity product effective with minimal dead zone.



Powder

Ultra Powder Mixer

The powder mixer can smoothly mix various powder raw materials through high-speed rotation. In addition, the mixing impeller is designed for easy cleaning and maintenance to provide user convenience. We also provide heating, cooling, and automatic transfer systems according to the user's inquiry.



Features

- Powder to powder mixing with filter application
- A high speed mixer efficient for mixing of materials that have different compositions
- Stainless steel product contact parts with mirror finish
- Air cylinder product discharge

Specifications

- Capacity : From 5 liter to 1,000 liter
- Mixing speed : Up to 1,150 rpm
- Motor power : 3.7 ~150kW



Model	Max. Useful Capacity	Demension (L x W x H mm) Length
UPM 5	1KG	350 x 670 x 1,400 (1,400)
UPM 10	2KG	640 x 1390 x 1,430 (1,430)
UPM 50	10KG	750 x 2160 x 1,290 (1,690)
UPM 100	20KG	750 x 2270 x 1,610 (2,190)
UPM 200	40KG	1,050 x 2700 x 1,790 (2,590)
UPM 300	60KG	1,050 x 2980 x 2,150 (2,850)
UPM 500	100KG	1,400 x 3600 x 2,750 (3,500)
UPM 1000	200KG	1,520 x 4500 x 2,750 (3,700)

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mixing technology



Powder

Ultra Hammer Mill

Hammer Mill is for pulverizing powder raw materials of various sizes and agglomerated powder products into uniform size or fine particles. And it also provides easy cleaning through easy assembly design without bolts connection.

Features

- Single lane to quad lane depending on the product volume
- Easy to clean design
- Micro filter

Model	Demension (L x W x H mm) Length
HAM 3	650 x 810 x 1350
HAM 10	900 x 1550 x 1750
HAM 15	900 x 1550 x 1750
HAM 30	1150 x 1800 x 1900



Others

Laboratory Mixer

The laboratory mixer designed by Woowon provides the facilities that researchers want, from a small tabletop mixer to a lab mixer that can use heating, cooling, and vacuum in the same way as manufacturing facilities.



Table top mixer

- Lab agitator without the vessel
- Single dispersion or homogenizer structure
- Stainless steel construction
- Impeller height adjustment (manual)
- Capacity; Up to 2 liter
- Homogenizer speed: Up to 10,000 rpm

Vaccum emulsifier type

- Internal homogenizing without external loop.
- Counter-rotating paddle agitator with scrapper or spiral agitator.
- Stainless steel product contact parts with mirror finish.
- Electronic heating and cooling vessel.
- Lid litter.
- Vessel tilting (manual) for discharge.
- Pilot batch mixer provides identical working environment with the production scale mixer.
- UM, HM, Custom mixer specification models available.



Powder Mixer Type

- Internal homogenizing without external loop.
- Stainless steel product contact parts with mirror finish.
- Manual cooling input
- Manual ON/OFF of tank top and outlet
- Air pressurized oil can be put into the upper hopper
- Pilot batch mixer provides identical working environment with the production scale mixer.



Others

Storage Tank

Features

- Movable / Stationary
- Pressurized/vacuum storage tank
- Stainless steel 316L / 304
- Custom design/size available
- Automatic product conveyer system available.
- Option: Agitator, temperature controller
- Various capacities available



Movable Mixer

Woowon's Movable Mixer is designed to be easily moved and used in narrow or necessary spaces.

Features

- Single impeller type mixer without the vessel
- Movable design
- Polished / matte finish stainless steel cover
- Automatic impeller height adjustment and swing function
- Choose from the dispersion, homogenizer or propeller impellers



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Woowon's
Automation Technology
Quality Assurance Program
and Service

Technology

Woowon CIP system

CIP System LV 01

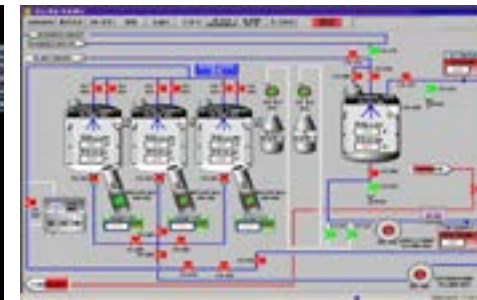
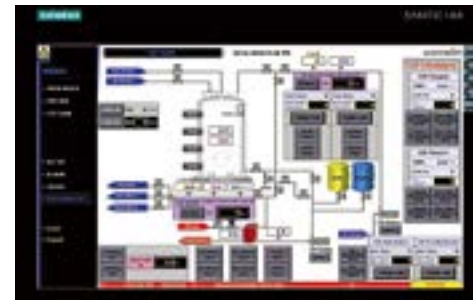
By using an agitator, CIP is possible only by adding a line without adding a separate tank or system.

CIP System LV 02

CIP operation with high pressure hot water supply through CIP tank and heating system

CIP System LV 03

By attaching the cleaning chemical tank and EC sensor to the existing CIP LV.02, it is possible to determine the degree of cleaning according to the conductivity of the circulating cleaning liquid. After setting the desired conductivity value, automatic circulation cleaning function is also available.



Technology

Woowon Automation

Level.1 Touch Screen

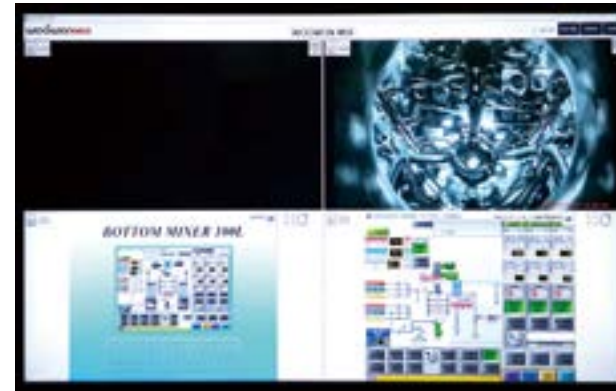
- Easy understanding screen layout.
- Saving batch report automatically and copy through USB drive.
- Semi-automatic recipe management system.

Level. 2 Monitoring system

- Monitoring touchscreen is possible from anywhere.
- The inside of the tank can be monitored in real time by special designed video cam.
- Operational status of manufacturing and progress can be checked through a remote monitor.

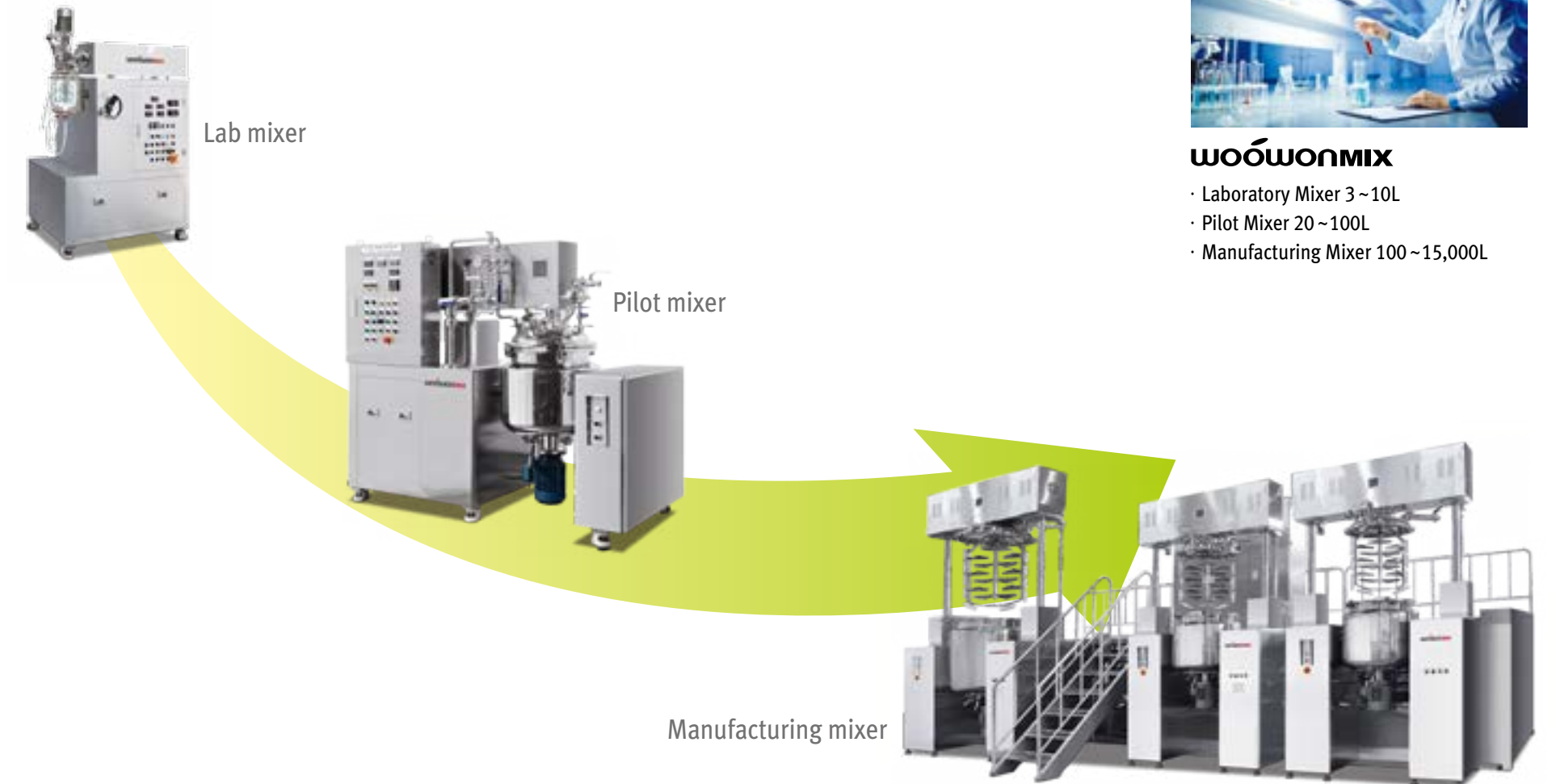
Level. 3 Automatic manufacturing system

- It is possible to transmit and receive product recipes and manufacturing information.
- Possible to link with R&D, manufacturing, bulk management system through company's internal ERP and smart factory system.
- Full-automatic recipe management system.



Woowon Scale Up

Woowon offers a complete package to share the same system laboratory mixer to pilot mixer and mass production mixer



Woowon Service

Test and Development Center

Woowon has several types of pilot facilities, including all measurement and test equipment, and can be used freely. This allows the optimization of existing processes and facilitates the development of new products.



Spare Parts

By thoroughly managing equipment production history and design data, we have a system that can provide accurate parts quickly when there is a demand for spare parts for processed or purchased products.



Intallation and Training

Woowon's professional installation and commissioning personnel visit all locations in the world and do their best to ensure that all procedures are carried out smoothly.

