### Specification

- **Components**
  - Syringe pumps: 6 units, Syringe: 1, 5, 10 ml-selectable (High-precision liquid transfer)
  - Vortex-mixer: 2500rpm (regular and reverse rotation)
    - (Automatic vortex-mixing with a touch panel system)
  - Evaporator: warmable, (High-efficient evaporation of organic solvent)
  - Continuous ultrasonic homogenizer: 250W output
    - (Automatic ultrasonic homogenization with a touch panel system)
  - Water-cooled continuous ultrasonic homogenization adaptor
    - (Continuous and batch-processing ultrasonic homogenization)

- **Air removal**
  - Complete air removal by means of nitrogen gas replacement

- **Cleaning**
  - Automatic cleaning with alcohol and pure water

- **Size**
  - 758W × 492D × 690H mm (no projection)

- **Weight**
  - About 85 kg

- **Power supply**
  - AC100V 50/60Hz 15A

**Hashimoto Electronic Industry Co., Ltd / Liposome Engineering Laboratory, Inc.**

Partnership Project Approved by the Ministry of Economy, Trade and Industry

“New Coordination Support Project” on June 26, 2009: Partners
Functional Liposomes that can be produced with Automated Multi-functional Liposome Manufacturing Equipment

1. Liposomes
   Multilamellar vesicles (MLV)
   Small unilamellar vesicles (SUV)
   Large unilamellar vesicles (LUV)
   Giant unilamellar vesicles (GUV)

2. Liposomes encapsulating pharmaceuticals, genes, nucleic acids, antibodies and enzymes
3. Liposomes sensitive to temperature, pH, magnetism, and ultrasound
4. Liposomes coated with PEG and saccharide chain
5. Liposomes with bound ligands, such as proteins, peptides, and nucleic acids
6. Reconstituted liposomes (proteoliposomes, virosomes and fusogenic liposomes)
7. Liposome vaccines

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Protein-bound liposome  Proteoliposomes  Liposome vaccines

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Hashimoto Electronic Industry Co., Ltd  /  Liposome Engineering Laboratory, Inc.