



aapptec

advanced automated  
peptide protein technologies

Spirit of Innovation

# Model 400



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Pilot Production Scale Peptide Synthesizer

## Pilot Production Scale Peptide Synthesizer

The Model 400 is designed to prepare all peptides consistently and efficiently at production scale. The Model 400 utilizes standard Boc or Fmoc protocols, while letting users develop their own custom protocols for optimizing product purity and synthesis yield. Reagents and amino acids are accurately and precisely dispensed through separate measuring vessels equipped with adjustable liquid sensors. The amino acids are preactivated in a preactivation vessel before transfer to the reaction vessel; this eliminates side reactions between the resin-peptide and coupling reagents and produces a purer peptide product. Thorough, efficient mixing in the reaction vessel is obtained by gentle orbital shaking, nitrogen bubbling, or a combination of both. These methods of mixing keep the resin intact without damage to the resin beads.

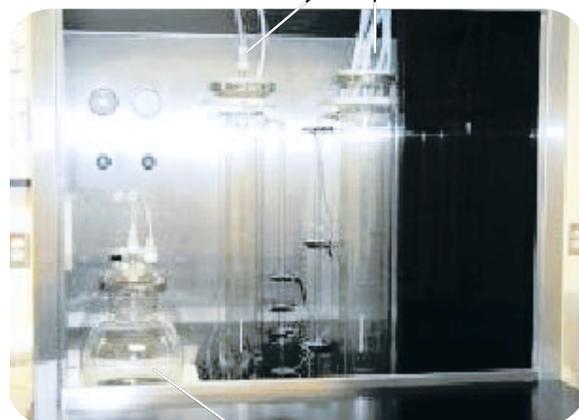
The Model 400 is available in multiple configurations:

- Small Scale: 20 g - 100 g resin
- Medium Scale: 100 g - 3 kg resin
- Large Scale: Over 3 kg resin

aapptec will custom build the Model 400 to your specifications.



**Measuring Vessels**



**Preactivation Vessel**

### **cGMP Synthesis**

- All parts used in the Model 400 are built to meet cGMP requirements
- Reactants, reagents and solvents contact only inert materials
- Key-lock access for cabinets
- Encrypted password access for each user
- Battery system in case of power outage
- Failure detection with corrective action
- Leak detection and alarms
- Error correcting protocol ensures data validity
- Stainless steel cabinets for easy cleaning

### **Ensures Quality Products**

- Gentle, thorough mixing by mechanical, nitrogen or a combination of both
- Top and/or bottom delivery for fast delivery and fast empty
- Liquid sensors and measuring vessels ensure precise and accurate deliveries
- Entire system under inert atmosphere
- Ultra-efficient washing

### **Separated Systems to Minimize Potential Cross Contamination**

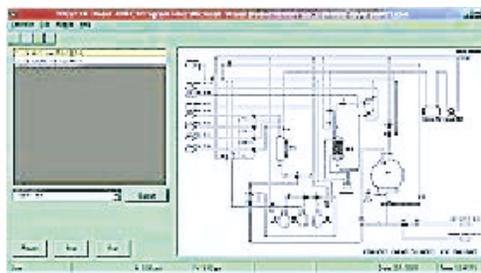
- Solvent delivery
- Reagent delivery
- Pre-activation
- Reaction and mixing
- Deprotection
- Waste handling and segregation

### **Two Separate Software Packages Available**

- Sequence based peptide synthesis software with master-file protocols
- Flexible process control software with expanded user design capabilities and process design language



**22-L Reaction Vessel**



**Model 400 Software**

### **Fully Customizable and Scalable**

- Vessels and containers are fully interchangeable for scales up to 200 Liters (higher volumes require additional components). Standard RV sizes range from 2 L up to 50 L.
- Component based design permits separation and relocation of components.
- Flexibility in process monitoring and control including expansion capabilities for customer system interface.

Model 400

## Model 400 Features & Options

- Multi-tasking Design for Concurrent Operations
- Menu-driven Software with Automatic Error Detection, Real-time Synthesis Feedback and On-line Instructions
- Top and/or Bottom Delivery to All Vessels for Fast Delivery and Empty
- Inert Atmosphere Liquid Transfer System
- Remote Reagent/Amino Acid Delivery System
- Numerous Amino Acid and Reaction Vessel Configurations
- Leak Detection Alarms
- Battery Backup Synthesis Protection
- Easy-to-Clean Stainless Steel Cabinets
- Durable Pneumatic Valves
- Custom Designed to Meet Special Requirements
- Full One-year, On-site Warranty

## SPECIFICATIONS

<b>Width:</b>	44" (111.8 cm) base; 44" (111.8 cm) measuring vessel cabinet; 28" (71.1 cm) mixer cabinet
<b>Depth:</b>	28" (71.1 cm) base; 16" (40.6 cm) measuring vessel cabinet; 29" (73.7 cm) mixer cabinet
<b>Height:</b>	35" (88.9cm) base; 41" (104.1cm) measuring vessel cabinet; 49" (124.5 cm) mixer cabinet
<b>Weight:</b>	2000 pounds (907.5 kg) without computer
<b>Mixing:</b>	Nitrogen/Argon and/or Variable Speed Oscillating
<b>Computer:</b>	HP Pentium-4, Windows XP™ Professional
<b>Monitor:</b>	HP 17" LCD Flat Screen
<b>Warranty:</b>	On site, parts and labor



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PEPTIDE PROTEIN TECHNOLOGIES

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