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Professional Hotplates,  
Stirrers &  
Hotplate-Stirrers



Advanced Hotplates,  
Stirrers &  
Hotplate-Stirrers



Professional Round Top  
Hotplate-Stirrers



Advanced Round Top  
Hotplate-Stirrers



Basic Mini Hotplates,  
Stirrers &  
Hotplate-Stirrers

	Professional Hotplates, Stirrers & Hotplate-Stirrers	Advanced Hotplates, Stirrers & Hotplate-Stirrers	Professional Round Top Hotplate-Stirrers	Advanced Round Top Hotplate-Stirrers	Basic Mini Hotplates, Stirrers & Hotplate-Stirrers
<b>Top Plate Dimensions (L x W)</b>	7 x 7", 10 x 10"	4 x 4", 7 x 7", 10 x 10"	5.3" Diameter	5.3" Diameter	4.5" Diameter
<b>Overall Dimensions (L x W x H)</b>	See page 52	See page 54	14.8 x 9.9 x 4.3" (37.6 x 25.1 x 10.9cm)	14.8 x 9.9 x 4.3" (37.6 x 25.1 x 10.9cm)	6.5 x 5.75 x 4.75" (16.5 x 14.6 x 12.1cm)
<b>Temperature Range</b>	Ambient +5° to 500°C Ceramic Aluminum Stainless Steel	Ambient +5° to 500°C Ambient +5° to 400°C N/A	N/A N/A Ambient +5° to 400°C	N/A N/A Ambient +5° to 400°C	N/A to 400°C N/A
<b>Temperature Stability</b>	Ceramic Aluminum Stainless Steel	± 1%* ± 1%* N/A	± 3%** ± 2%** N/A	N/A ± 1%*** ± 1%***	N/A ± 3%** ± 3%**
<b>Speed Range</b>	60 to 1600rpm	60 to 1600rpm	60 to 1600rpm	60 to 1600rpm	100 to 1200rpm
<b>Speed Stability</b>	± 2%	± 2%	± 2%	± 2%	± 2%
<b>Timer (Digital Models)</b>	1 second to 160 hours	N/A	1 second to 160 hours	N/A	N/A
<b>Maximum Capacity (H<sub>2</sub>O)</b>	2500mL, 6000mL	600mL, 2500mL, 6000mL	1500mL	1500mL	1000mL
<b>Ship Weight</b>	See Page 52	See Page 54	11.7lbs (5.3kg)	9.4lbs (4.3kg)	4.5lbs (2kg)

\* Plate Control: Below 100°C ±2°C. Environmental and sample conditions permitting.  
Probe Control: Below 100°C ±1°C. Environmental and sample conditions permitting.

\*\* Below 100°C ±2°C. Environmental and sample conditions permitting.  
\*\*\* Below 100°C ±1°C. Environmental and sample conditions permitting.

### How to Select a Hotplate/Stirrer

Review the following points to help you select the appropriate hotplate/stirrer for your unique application.

#### 1. Control Types

The **Professional** series offers a closed loop PID microprocessor for both temperature and speed control, but additionally offers electronic feedback for control of both temperature and speed. These units offer the best in accuracy and precision. A built-in timer allows for greater independence. Also included with the Professional series Hotplates and Hotplate-Stirrers is an external stainless steel temperature probe. It guarantees the utmost in sample temperature monitoring and control, delivering ±1% temperature stability and supplied with a 12" flexible arm and three interchangeable clamps.

The **Advanced** series is very accurate and offers a closed loop PID microprocessor for both temperature and speed which automatically stabilizes the top plate for temperature and/or stirring speeds by regulating for variations in the system with regards to the original set-point. Utilizing electronic user feedback, it offers the most optimal measure for temperature control by providing greater accuracy and ease-in-use for reproducing your results.

The **Basic Mini** series offers an open loop speed control and a mechanical thermostat that is not designed for exact regulation over speed or temperature. When precision is not needed these units offer an economical and reliable alternative.

#### 2. Temperature needs

Temperature uniformity refers to the consistency of the temperature across the top plate. Each top plate material has its pros and cons. Ceramic top plates are more chemical resistant, heat up very quickly, and are easy to clean. The white reflective surface aids in viewing the sample. However; ceramic tops are subject to thermal shock. Heating of metallic vessels should be avoided. The edges of a ceramic top plate may not be as hot as the center where the heating element is located. Aluminum top plates offer a more uniform heating surface, will not crack or chip but are more susceptible to corrosion and more difficult to clean.

## Hotplate/Stirrer Selection Guide

Standard / Advanced  
High Volume StirrersAdvanced Large Capacity  
Stirrer Model 1000 /  
Model 2000Standard / Advanced  
Multi-Position StirrersStandard / Advanced  
Slow Speed Stirrers  
4 Position / 10LStandard / Advanced  
Slow Speed Stirrers  
1 Position

12.5 x 11"	21.25 x 25"	12.5 x 11"	12.5 x 11"	7 x 7"
17 x 11 x 3.8" (43.2 x 27.9 x 9.7cm)	28.5 x 26.75 x 5.25" (72.4 x 68 x 13.3cm)	17 x 11 x 4" (43.2 x 27.9 x 10.2cm)	17 x 11 x 4" (43.2 x 27.9 x 10.2cm)	21.1 x 8.5 x 3.5" (53.6 x 21.6 x 8.9cm)
N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A
N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A
60 to 1400rpm	100 to 1800 rpm	60 to 1400rpm	1 to 150rpm	1 to 150rpm
± 2%	± 2%	± 2%	±1%	± 1%
1 second to 160 hours	1 second to 160 hours	1 second to 160 hours	1 second to 160 hours	1 second to 160 hours
25L	100L / 200L	See Page 63	1L / 10L	2L
14.6lbs (6.6kg)	63lbs (28.6kg)	14.75lbs (6.69kg)	14.5lbs (6.6kg)	8.8lbs (4kg)

### 3. Sample size

The size or volume of your sample is another important factor to consider when selecting a hotplate or stirrer. Always consider the largest sample that you may be working with and look for one that can handle that capacity. The capacities listed are based on water. A viscous sample will weigh more than water.

### 4. Viscosity

Sample viscosity plays a role in selecting a stirrer. The magnetic coupling strength is a factor in determining which size stirrer to choose. The right drive magnet and stir bar combination is needed to efficiently stir the sample. Variables such as sample size or weight and top plate size dictate which stirrer will work best. The stir bar size and shape, the distance between the drive magnet and the stir bar, vessel shape and size, speed and viscosity also must be considered. The more viscous the sample, the greater magnetic coupling strength needed.

- Excellent temperature uniformity
- Cool touch, chemical resistant housing
- Includes RTD temperature probe kit

Talboys Professional Hotplates, Stirrers, and Hotplate-Stirrers are designed for applications that require exceptional accuracy, stability, and repeatability. Exclusive safety features help protect operator and sample. Enhanced microprocessor control offers an external RTD probe option that delivers superior temperature control of the sample. Stirring function, with continuous duty motor and powerful magnet, maintains set speed even under changing load or viscosity. Separate LED displays for temperature, speed, and time allow user to view all settings at once.

### Operating Features:

**Low Profile Design:** Takes up minimal space and fits easily into fume hoods. Spill-resistant design channels fluids away from internal components.

**Microprocessor Control:** Advanced electronics regulate both heating and stirring and bring samples to temperature quickly and efficiently. An internal RTD accurately measures and controls temperature. Precise speed control provides consistent stirring at all speeds. Powerful continuous duty motor delivers dependable and reliable stirring.

**Control Panel:** Touch pad controls with easy-to-read, independent LED displays for temperature, speed, and time allow operator to view all settings at once. Provides repeatable and accurate results every time and is easily visible from outside fume hoods or across lab benches. Shows set-point and actual temperatures. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

**Ceramic or Aluminum Top Plate Materials:** Ceramic tops feature a chemical resistant, reflective white top plate surface that is easy to clean. Durable aluminum tops will not crack or chip, and provide a more even temperature distribution.

**Built-In Support Rod Holder:** Rear housing features an off-centered, built-in support rod holder with locking knob that accepts the probe kit supplied with heating models.

**RTD Probe Kit:** Heating models are supplied with a probe kit which includes an 8" (20.3cm) stainless steel PT1000 RTD temperature probe, 12" (30.5cm) flex arm, interchangeable 3-prong clamp head, 2-prong clamp head and spring clamp head.

### Safety Features:

**Cool Touch Housing:** Housing is made of a heat resistant polymer that is not only cool to the touch, but is also chemical resistant.

**Hot Top Indicator:** For additional safety, hot symbol warning light is illuminated when heat is turned on and remains on until top plate cools down (for hotplates or hotplate-stirrers).

**Stir Protection:** If stirrer motor stops or fails, unit will automatically shut down heater (for hotplate-stirrers).

**Speed Ramping Feature:** Slowly increases motor speed for improved safety and enhanced coupling. Avoids splashing, improves spin bar control, and provides excellent low end speed control (for stirrers or hotplate-stirrers).

**Maximum Temperature Limiting (Plate Over Temperature Limit):** Ensures plate temperature will never exceed users programmed set temperature limit, allowing for control of samples with sensitive flash points (for hotplates or hotplate-stirrers).

**Audible Alarm:** In timed mode, alarm will sound when time reaches zero or when unit reaches set-point temperature (for hotplates or hotplate-stirrers).

**Probe Protection:** If probe disengages from sample, unit will automatically shut off heater (for hotplates or hotplate-stirrers).



984TA7CHSUSP

### Operating Conditions:

Unit can be run in conditions from 5 to 40°C (41 to 104°F), 20% to 80% relative humidity, non-condensing.

### Ordering Information:

Units include a 92" (234cm) detachable, 3-wire cord and plug (230V units are supplied with Euro type plug). Stirrers and hotplate-stirrers are supplied with a 1.5" (3.8cm) PTFE coated stir bar. Hotplates and hotplate-stirrers are supplied with a probe kit which includes an 8" (20.3cm) stainless steel PT1000 RTD temperature probe, 12" (30.5cm) flex arm, and interchangeable 3-prong clamp head, 2-prong clamp head and spring clamp head. **5 year limited warranty on parts and labor.**

### Specifications

Top Plate Dimensions	
7 x 7" Units	7 x 7" (17.8 x 17.8cm)
10 x 10" Units	10 x 10" (25.4 x 25.4cm)
Temperature Range	
Ceramic Top Plate Units	Ambient +5°C to 500°C
Aluminum Top Plate Units	Ambient +5°C to 400°C
Temperature Stability*	± 1%
Speed Range	60 to 1600rpm
Speed Stability	± 2%
Timer	1 second to 160 hours
Maximum Capacity (H <sub>2</sub> O)	
7 x 7" Units	2500mL
10 x 10" Units	6000mL
Overall Dimensions (L x W x H)	
7 x 7" Units	14.8 x 9.9 x 4.3" (37.6 x 25 x 10.9cm)
10 x 10" Units	17.9 x 13 x 4.3" (45.5 x 33 x 10.9cm)
Ship Weight	
7 x 7" Units	12lbs (5.4kg)
10 x 10" Units	17.4lbs (7.9kg)

\* Plate Control: Below 100°C ± 2°C. Environmental and sample conditions permitting.

\* Probe Control: Below 100°C ± 1°C. Environmental and sample conditions permitting.

## Professional Hotplates, Stirrers &amp; Hotplate-Stirrers

**Optional NIST Traceable Calibration Certificate** provided by Troemner's ISO/IEC 17025 accredited laboratory. Multiple data points within the temperature and speed ranges, and time function, are reported on the certificate with the associated uncertainties. **Replacement probes** are available, see accessories on page 66.

Professional Hotplates			
Description	Top Plate Material	Electrical (50/60 Hz)	Part Number
7 x 7" (17.8 x 17.8cm) Hotplate	Ceramic	120V   7.9 amps   950 watts	984TA7CHPUSP
7 x 7" (17.8 x 17.8cm) Hotplate	Ceramic	230V   4.4 amps   1000 watts	984TA7CHPEUP
7 x 7" (17.8 x 17.8cm) Hotplate	Aluminum	120V   7.9 amps   950 watts	984TA7AHPUSP
7 x 7" (17.8 x 17.8cm) Hotplate	Aluminum	230V   4.4 amps   1000 watts	984TA7AHEUP
7 x 7" (17.8 x 17.8cm) Hotplate with NIST Traceable Certificate	Ceramic	120V   7.9 amps   950 watts	984TA7CHPUSC
7 x 7" (17.8 x 17.8cm) Hotplate with NIST Traceable Certificate	Ceramic	230V   4.4 amps   1000 watts	984TA7CHPEUC
7 x 7" (17.8 x 17.8cm) Hotplate with NIST Traceable Certificate	Aluminum	120V   7.9 amps   950 watts	984TA7AHPUSC
7 x 7" (17.8 x 17.8cm) Hotplate with NIST Traceable Certificate	Aluminum	230V   4.4 amps   1000 watts	984TA7AHEUC
10 x 10" (25.4 x 25.4cm) Hotplate	Ceramic	120V   12.5 amps   1500 watts	984TA0CHPUSP
10 x 10" (25.4 x 25.4cm) Hotplate	Ceramic	230V   6.7 amps   1550 watts	984TA0CHPEUP
10 x 10" (25.4 x 25.4cm) Hotplate	Aluminum	120V   12.5 amps   1500 watts	984TA0AHPUSP
10 x 10" (25.4 x 25.4cm) Hotplate	Aluminum	230V   6.7 amps   1550 watts	984TA0AHEUP
10 x 10" (25.4 x 25.4cm) Hotplate with NIST Traceable Certificate	Ceramic	120V   12.5 amps   1500 watts	984TA0CHPUSC
10 x 10" (25.4 x 25.4cm) Hotplate with NIST Traceable Certificate	Ceramic	230V   6.7 amps   1550 watts	984TA0CHPEUC
10 x 10" (25.4 x 25.4cm) Hotplate with NIST Traceable Certificate	Aluminum	120V   12.5 amps   1500 watts	984TA0AHPUSC
10 x 10" (25.4 x 25.4cm) Hotplate with NIST Traceable Certificate	Aluminum	230V   6.7 amps   1550 watts	984TA0AHEUC

Professional Stirrers			
Description	Top Plate Material	Electrical (50/60 Hz)	Part Number
7 x 7" (17.8 x 17.8cm) Stirrer	Ceramic	120V   0.4 amps   50 watts	984TA7CSTUSP
7 x 7" (17.8 x 17.8cm) Stirrer	Ceramic	230V   0.2 amps   50 watts	984TA7CSTEUP
7 x 7" (17.8 x 17.8cm) Stirrer	Aluminum	120V   0.4 amps   50 watts	984TA7ASTUSP
7 x 7" (17.8 x 17.8cm) Stirrer	Aluminum	230V   0.2 amps   50 watts	984TA7ASTEUP
7 x 7" (17.8 x 17.8cm) Stirrer with NIST Traceable Certificate	Ceramic	120V   0.4 amps   50 watts	984TA7CSTUSC
7 x 7" (17.8 x 17.8cm) Stirrer with NIST Traceable Certificate	Ceramic	230V   0.2 amps   50 watts	984TA7CSTEUC
7 x 7" (17.8 x 17.8cm) Stirrer with NIST Traceable Certificate	Aluminum	120V   0.4 amps   50 watts	984TA7ASTUSC
7 x 7" (17.8 x 17.8cm) Stirrer with NIST Traceable Certificate	Aluminum	230V   0.2 amps   50 watts	984TA7ASTEUC
10 x 10" (25.4 x 25.4cm) Stirrer	Ceramic	120V   0.4 amps   50 watts	984TA0CSTUSP
10 x 10" (25.4 x 25.4cm) Stirrer	Ceramic	230V   0.2 amps   50 watts	984TA0CSTEUP
10 x 10" (25.4 x 25.4cm) Stirrer	Aluminum	120V   0.4 amps   50 watts	984TA0ASTUSP
10 x 10" (25.4 x 25.4cm) Stirrer	Aluminum	230V   0.2 amps   50 watts	984TA0ASTEUP
10 x 10" (25.4 x 25.4cm) Stirrer with NIST Traceable Certificate	Ceramic	120V   0.4 amps   50 watts	984TA0CSTUSC
10 x 10" (25.4 x 25.4cm) Stirrer with NIST Traceable Certificate	Ceramic	230V   0.2 amps   50 watts	984TA0CSTEUC
10 x 10" (25.4 x 25.4cm) Stirrer with NIST Traceable Certificate	Aluminum	120V   0.4 amps   50 watts	984TA0ASTUSC
10 x 10" (25.4 x 25.4cm) Stirrer with NIST Traceable Certificate	Aluminum	230V   0.2 amps   50 watts	984TA0ASTEUC

Professional Hotplate-Stirrers			
Description	Top Plate Material	Electrical (50/60 Hz)	Part Number
7 x 7" (17.8 x 17.8cm) Hotplate-Stirrer	Ceramic	120V   8.3 amps   1000 watts	984TA7CHSUSP
7 x 7" (17.8 x 17.8cm) Hotplate-Stirrer	Ceramic	230V   4.6 amps   1050 watts	984TA7CHSEUP
7 x 7" (17.8 x 17.8cm) Hotplate-Stirrer	Aluminum	120V   8.3 amps   1000 watts	984TA7AHSUSP
7 x 7" (17.8 x 17.8cm) Hotplate-Stirrer	Aluminum	230V   4.6 amps   1050 watts	984TA7AHEUP
7 x 7" (17.8 x 17.8cm) Hotplate-Stirrer with NIST Traceable Certificate	Ceramic	120V   8.3 amps   1000 watts	984TA7CHSUSC
7 x 7" (17.8 x 17.8cm) Hotplate-Stirrer with NIST Traceable Certificate	Ceramic	230V   4.6 amps   1050 watts	984TA7CHSEUC
7 x 7" (17.8 x 17.8cm) Hotplate-Stirrer with NIST Traceable Certificate	Aluminum	120V   8.3 amps   1000 watts	984TA7AHSUSC
7 x 7" (17.8 x 17.8cm) Hotplate-Stirrer with NIST Traceable Certificate	Aluminum	230V   4.6 amps   1050 watts	984TA7AHEUC
10 x 10" (25.4 x 25.4cm) Hotplate-Stirrer	Ceramic	120V   12.9 amps   1550 watts	984TA0CHSUSP
10 x 10" (25.4 x 25.4cm) Hotplate-Stirrer	Ceramic	230V   7.0 amps   1600 watts	984TA0CHSEUP
10 x 10" (25.4 x 25.4cm) Hotplate-Stirrer	Aluminum	120V   12.9 amps   1550 watts	984TA0AHSUSP
10 x 10" (25.4 x 25.4cm) Hotplate-Stirrer	Aluminum	230V   7.0 amps   1600 watts	984TA0AHEUP
10 x 10" (25.4 x 25.4cm) Hotplate-Stirrer with NIST Traceable Certificate	Ceramic	120V   12.9 amps   1550 watts	984TA0CHSUSC
10 x 10" (25.4 x 25.4cm) Hotplate-Stirrer with NIST Traceable Certificate	Ceramic	230V   7.0 amps   1600 watts	984TA0CHSEUC
10 x 10" (25.4 x 25.4cm) Hotplate-Stirrer with NIST Traceable Certificate	Aluminum	120V   12.9 amps   1550 watts	984TA0AHSUSC
10 x 10" (25.4 x 25.4cm) Hotplate-Stirrer with NIST Traceable Certificate	Aluminum	230V   7.0 amps   1600 watts	984TA0AHEUC

- Excellent temperature uniformity
- Cool touch, chemical resistant housing
- LED display for temperature

Talboys Advanced Hotplates, Stirrers and Hotplate-Stirrers deliver accurate and repeatable results. These units are microprocessor controlled and have an LED display for temperature. Control panel features easy-to-use controls which allow users to dial in adjustments. Rear housing features an integral support rod holder with locking knob to accept the optional support rod and clamp kit.

### Operating Features:

**Low Profile Design:** Takes up minimal space and fits easily into fume hoods. Spill-resistant design channels fluids away from internal components.

**LED Display:** Shows set-point temperature. Display is easy-to-read and provides repeatable and accurate results every time.

**Control Panel:** Adjustment knob for temperature displays set-point in LED display. Stir control knob has rpm adjustment markings.

**Recall Last Temperature:** Built-in memory allows users to recall last set temperature, even when unit has been turned off.

**Microprocessor Control:** Advanced electronics regulate both heating and stirring and bring samples to temperature quickly and efficiently. An internal RTD accurately measures and controls temperature. Precise speed control provides consistent stirring at all speeds. Powerful continuous duty motor delivers dependable and reliable stirring.

**Heating Capacity:** Robust heater allows heating surface to reach set-point quickly.

**Ceramic or Aluminum Top Plate Materials:** Ceramic tops feature a chemical resistant, reflective white top plate surface that is easy to clean. Durable aluminum tops will not crack or chip, and provide a more even temperature distribution.

**Built-In Support Rod Holder:** Rear housing features an off-centered, built-in support rod holder with locking knob that accepts the optional Support Rod and Clamp Kit.

### Safety Features:

**Cool Touch Housing:** Housing is made of a heat resistant polymer that is not only cool to the touch, but is also chemical resistant.

**Hot Top Indicator:** For additional safety, hot symbol warning light is illuminated when heat is turned on and remains on until top plate cools down, (for hotplates or hotplate-stirrers).

**Stir Protection:** If stirrer motor stops or fails, unit will automatically shut down heater (for hotplate-stirrers).

**Speed Ramping Feature:** Slowly increases speed for improved safety and enhanced coupling. Avoids splashing, improves spin bar control and provides excellent low end speed control (for stirrers or hotplate-stirrers).

**Optional Support Rod and Clamp Kit:** Kit includes 18" (45.7cm) stainless steel support rod, 3-prong medium swivel clamp, thermometer/temperature probe extension clamp, and hook connector. See page 67 for all options.

### Operating Conditions:

Unit can be run in conditions from 5 to 40°C (41 to 104°F), 20% to 80% relative humidity, non-condensing.

### Ordering Information:

Units include a 92" (234cm) detachable, 3-wire cord and plug (230 volt units are supplied with Euro type plug). Stirrers and Hotplate-Stirrers are supplied with a 1.5" (3.8cm) PTFE coated stir bar. **5 year limited warranty on parts and labor.**



984TA7CHSUSA

### Specifications

Top Plate Dimensions	
4 x 4" Units	4 x 4" (10.2 x 10.2cm)
7 x 7" Units	7 x 7" (17.8 x 17.8cm)
10 x 10" Units	10 x 10" (25.4 x 25.4cm)
Temperature Range	
Ceramic Top Plate Units	Ambient +5°C to 500°C
Aluminum Top Plate Units	Ambient +5°C to 400°C
Temperature Stability*	
Ceramic Top Plate Units	± 3%
Aluminum Top Plate Units	± 2%
Speed Range	60 to 1600rpm
Speed Stability	± 2%
Maximum Capacity (H <sub>2</sub> O)	
4 x 4" Units	600mL
7 x 7" Units	2500mL
10 x 10" Units	6000mL
Overall Dimensions (L x W x H)	
4 x 4" Units	10.8 x 6.6 x 4.3" (27.4 x 16.8 x 10.9cm)
7 x 7" Units	14.8 x 9.9 x 4.3" (37.6 x 25 x 10.9cm)
10 x 10" Units	17.9 x 13 x 4.3" (45.5 x 33 x 10.9cm)
Ship Weight	
4 x 4" Units	6.2lbs (2.8kg)
7 x 7" Units	10.5lbs (4.8kg)
10 x 10" Units	15.9lbs (7.2kg)

\* Below 100°C ± 2°C. Environmental and sample conditions permitting.

## Advanced Hotplates, Stirrers &amp; Hotplate-Stirrers

Advanced Hotplates			
Description	Top Plate Material	Electrical (50/60 Hz)	Part Number
4 x 4" (10.2 x 10.2cm) Hotplate	Ceramic	120V   2.9 amps   350 watts	984TA4CHPUSA
4 x 4" (10.2 x 10.2cm) Hotplate	Ceramic	230V   1.5 amps   350 watts	984TA4CHPEUA
4 x 4" (10.2 x 10.2cm) Hotplate	Aluminum	120V   2.9 amps   350 watts	984TA4AHPUSA
4 x 4" (10.2 x 10.2cm) Hotplate	Aluminum	230V   1.5 amps   350 watts	984TA4AHPEUA
7 x 7" (17.8 x 17.8cm) Hotplate	Ceramic	120V   7.9 amps   950 watts	984TA7CHPUSA
7 x 7" (17.8 x 17.8cm) Hotplate	Ceramic	230V   4.4 amps   1000 watts	984TA7CHPEUA
7 x 7" (17.8 x 17.8cm) Hotplate	Aluminum	120V   7.9 amps   950 watts	984TA7AHPUSA
7 x 7" (17.8 x 17.8cm) Hotplate	Aluminum	230V   4.4 amps   1000 watts	984TA7AHPEUA
10 x 10" (25.4 x 25.4cm) Hotplate	Ceramic	120V   12.5 amps   1500 watts	984TA0CHPUSA
10 x 10" (25.4 x 25.4cm) Hotplate	Ceramic	230V   6.7 amps   1550 watts	984TA0CHPEUA
10 x 10" (25.4 x 25.4cm) Hotplate	Aluminum	120V   12.5 amps   1550 watts	984TA0AHPUSA
10 x 10" (25.4 x 25.4cm) Hotplate	Aluminum	230V   6.7 amps   1550 watts	984TA0AHPEUA
Advanced Stirrers			
Description	Top Plate Material	Electrical (50/60 Hz)	Part Number
4 x 4" (10.2 x 10.2cm) Stirrer	Ceramic	120V   0.4 amps   50 watts	984TA4CSTUSS
4 x 4" (10.2 x 10.2cm) Stirrer	Ceramic	230V   0.2 amps   50 watts	984TA4CSTEUS
4 x 4" (10.2 x 10.2cm) Stirrer	Aluminum	120V   0.4 amps   50 watts	984TA4ASTUSS
4 x 4" (10.2 x 10.2cm) Stirrer	Aluminum	230V   0.2 amps   50 watts	984TA4ASTEUS
7 x 7" (17.8 x 17.8cm) Stirrer	Ceramic	120V   0.4 amps   50 watts	984TA7CSTUSS
7 x 7" (17.8 x 17.8cm) Stirrer	Ceramic	230V   0.2 amps   50 watts	984TA7CSTEUS
7 x 7" (17.8 x 17.8cm) Stirrer	Aluminum	120V   0.4 amps   50 watts	984TA7ASTUSS
7 x 7" (17.8 x 17.8cm) Stirrer	Aluminum	230V   0.2 amps   50 watts	984TA7ASTEUS
10 x 10" (25.4 x 25.4cm) Stirrer	Ceramic	120V   0.4 amps   50 watts	984TA0CSTUSS
10 x 10" (25.4 x 25.4cm) Stirrer	Ceramic	230V   0.2 amps   50 watts	984TA0CSTEUS
10 x 10" (25.4 x 25.4cm) Stirrer	Aluminum	120V   0.4 amps   50 watts	984TA0ASTUSS
10 x 10" (25.4 x 25.4cm) Stirrer	Aluminum	230V   0.2 amps   50 watts	984TA0ASTEUS
Advanced Hotplate-Stirrers			
Description	Top Plate Material	Electrical (50/60 Hz)	Part Number
4 x 4" (10.2 x 10.2cm) Hotplate-Stirrer	Ceramic	120V   3.3 amps   400 watts	984TA4CHSUSA
4 x 4" (10.2 x 10.2cm) Hotplate-Stirrer	Ceramic	230V   1.7 amps   400 watts	984TA4CHSEUA
4 x 4" (10.2 x 10.2cm) Hotplate-Stirrer	Aluminum	120V   3.3 amps   400 watts	984TA4AHSUSA
4 x 4" (10.2 x 10.2cm) Hotplate-Stirrer	Aluminum	230V   1.7 amps   400 watts	984TA4AHSEUA
7 x 7" (17.8 x 17.8cm) Hotplate-Stirrer	Ceramic	120V   8.3 amps   1000 watts	984TA7CHSUSA
7 x 7" (17.8 x 17.8cm) Hotplate-Stirrer	Ceramic	230V   4.6 amps   1050 watts	984TA7CHSEUA
7 x 7" (17.8 x 17.8cm) Hotplate-Stirrer	Aluminum	120V   8.3 amps   1000 watts	984TA7AHSUSA
7 x 7" (17.8 x 17.8cm) Hotplate-Stirrer	Aluminum	230V   4.6 amps   1050 watts	984TA7AHSEUA
10 x 10" (25.4 x 25.4cm) Hotplate-Stirrer	Ceramic	120V   12.9 amps   1550 watts	984TA0CHSUSA
10 x 10" (25.4 x 25.4cm) Hotplate-Stirrer	Ceramic	230V   7.0 amps   1600 watts	984TA0CHSEUA
10 x 10" (25.4 x 25.4cm) Hotplate-Stirrer	Aluminum	120V   12.9 amps   1550 watts	984TA0AHSUSA
10 x 10" (25.4 x 25.4cm) Hotplate-Stirrer	Aluminum	230V   7.0 amps   1600 watts	984TA0AHSEUA

- Excellent temperature uniformity
- Cool touch, chemical resistant housing
- Includes RTD temperature probe kit

Talboys Professional Round Top Hotplate-Stirrers are designed for applications that require exceptional accuracy, stability, and repeatability. Exclusive safety features help protect operator and sample. Enhanced microprocessor control offers an external RTD probe option that delivers superior temperature control of the sample. Stirring function, with continuous duty motor and powerful magnet, maintains set speed even under changing load or viscosity. Separate LED displays for temperature, speed, and time allow user to view all settings at once.

### Operating Features:

**Low Profile Design:** Takes up minimal space and fits easily into fume hoods. Spill-resistant design channels fluids away from internal components.

**Microprocessor Control:** Advanced electronics regulate both heating and stirring and bring samples to temperature quickly and efficiently. Temperature measurement is controlled more accurately by utilizing an internal RTD. Speed is precisely controlled, and provides consistent stirring at all speeds. Powerful continuous duty motor delivers dependable and reliable stirring.

**Control Panel:** Touch pad controls with easy-to-read, independent LED displays for temperature, speed, and time allow operator to view all settings at once. Provides repeatable and accurate results every time and is easily visible from outside fume hoods or across lab benches. Shows set-point and actual temperature. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

**Stainless Steel Top Plate:** 5.3" (135mm) diameter top plate is durable and will not crack. Accepts optional Talboys base plate that holds a variety of block options for holding multiple samples at one time.

**Built-in Support Rod Holder:** Rear housing features an off-centered, built-in support rod holder with locking knob that accepts the probe kit.

### Safety Features:

**Cool Touch Housing:** Housing is made of a heat resistant polymer that is not only cool to the touch, but is also chemical resistant.

**Hot Top Indicator:** For additional safety, hot symbol warning light is illuminated when heat is turned on and remains on until top plate cools down.

**Stir Protection:** If stirrer motor stops or fails, unit will automatically shut down heater (for hotplate-stirrers).

**Speed Ramping Feature:** Slowly increases speed for improved safety and enhanced coupling. Avoids splashing, improves spin bar control and provides excellent low end speed control.

**Maximum Temperature Limiting (Plate Over Temperature Limit):** Ensures plate temperature will never exceed users programmed set temperature limit, allowing for control of samples with sensitive flash points.

**Audible Alarm:** In timed mode, alarm will sound when time reaches zero or when unit reaches set-point temperature.

**Probe Protection:** If probe disengages from sample, unit will automatically shut off heater.



984TARSHSUSP

### Operating Conditions:

Unit can be run in conditions from 5 to 40°C (41 to 104°F), 20% to 80% relative humidity, non-condensing.

### Ordering Information:

Units include a 92" (234cm) detachable, 3-wire cord and plug (230V units are supplied with Euro type plug). Units are also supplied with a 1.5" (3.8cm) PTFE coated stir bar and RTD probe kit which includes a PT1000, 8" (20.3cm) stainless steel RTD temperature probe, 12" (30.5cm) flex arm and interchangeable 3-prong clamp head, 2-prong clamp head, and spring clamp head. **5 year limited warranty on parts and labor.**

**Optional NIST Traceable Calibration Certificate** provided by Troemner's ISO/IEC 17025 accredited laboratory. Multiple data points within the temperature and speed ranges, and time function, are reported on the certificate with the associated uncertainties.

Specifications	
Temperature Range	Ambient +5°C to 400°C
Temperature Stability*	± 1%
Speed Range	60 to 1600rpm
Speed Stability	± 2%
Maximum Capacity	1500mL
Top Plate Dimensions (Dia.)	5.3" (135mm)
Overall Dimensions (L x W x H)	14.8 x 9.9 x 4.3" (37.6 x 25.1 x 10.9cm)
Ship Weight	11.7lbs (5.3kg)

\* Below 100°C ± 1°C. Environmental and sample conditions permitting.

### Description

Professional Round Top Hotplate-Stirrer  
 Professional Round Top Hotplate-Stirrer  
 Professional Round Top Hotplate-Stirrer with NIST Traceable Certificate  
 Professional Round Top Hotplate-Stirrer with NIST Traceable Certificate

### Electrical (50/60 Hz)

120V | 8.3 amps | 500 watts  
 230V | 4.6 amps | 500 watts  
 120V | 8.3 amps | 500 watts  
 230V | 4.6 amps | 500 watts

### Part Number

984TARSHSUSP  
 984TARSHSEUP  
 984TARSHSUSC  
 984TARSHSEUC



## Advanced Round Top Hotplate-Stirrers



- Excellent temperature uniformity
- Cool touch, chemical resistant housing
- LED display for temperature

Talboys Advanced Round Top Hotplate-Stirrers deliver accurate and repeatable results. These units are microprocessor controlled and have an LED display for temperature. Control panel features easy-to-use controls which allow users to dial in adjustments. Rear housing features an integral support rod holder with locking knob to accept the optional Support Rod and Clamp Kit.

**Operating Features:**

**Low Profile Design:** Takes up minimal space and fits easily into fume hoods. Spill-resistant design channels fluids away from internal components.

**LED Display:** Shows set-point temperature. Display is easy-to-read and provides repeatable and accurate results every time.

**Control Panel:** Adjustment knob for temperature displays set-point in LED display. Stir control knob has rpm adjustment markings.

**Recall Last Temperature:** Built-in memory allows users to recall last set temperature, even when unit has been turned off.

**Microprocessor Control:** Advanced electronics regulate both heating and stirring and bring samples to temperature quickly and efficiently. Temperature measurement is controlled more accurately by utilizing an internal RTD. Speed is precisely controlled, and provides consistent stirring at all speeds. Powerful continuous duty motor delivers dependable and reliable stirring.

**Heating Capacity:** Robust heater allows heating surface to reach set-point quickly.

**Stainless Steel Top Plate:** 5.3" (135mm) diameter top plate is durable and will not crack. Accepts optional Talboys base plate that holds a variety of block options for holding multiple samples at one time.

**Built-In Support Rod Holder:** Rear housing features an off-centered, built-in support rod holder with locking knob that accepts the optional Support Rod and Clamp Kit.

**Safety Features:**

**Cool Touch Housing:** Housing is made of a heat resistant polymer that is not only cool to the touch, but is also chemical resistant.

**Hot Top Indicator:** For additional safety, hot symbol warning light is illuminated when heat is turned on and remains on until top plate cools down.

**Stir Protection:** If stirrer motor stops or fails, unit will automatically shut down heater (for hotplate-stirrers).

**Speed Ramping Feature:** Slowly increases speed for improved safety and enhanced coupling. Avoids splashing, improves spin bar control, and provides excellent low end speed control.

**Optional Support Rod and Clamp Kit:** Kit includes 18" (45.7cm) stainless steel support rod, 3-prong medium swivel clamp, thermometer/temperature probe extension clamp, and hook connector. See page 67 for all options.



984TARSHSUSA

**Operating Conditions:**

Unit can be run in conditions from 5 to 40°C (41 to 104°F), 20% to 80% relative humidity, non-condensing.

**Ordering Information:**

Units include a 92" (234cm) detachable, 3-wire cord and plug (230V units are supplied with Euro type plug). Units are also supplied with a 1.5" (3.8cm) PTFE coated stir bar. **5 year limited warranty on parts and labor.**

Specifications	
Temperature Range	Ambient +5° to 400°C
Temperature Stability*	± 3%
Speed Range	60 to 1600rpm
Speed Stability	± 2%
Maximum Capacity	1500mL
Top Plate Dimensions (Dia.)	5.3" (135mm)
Overall Dimensions (L x W x H)	14.8 x 9.9 x 4.3" (37.6 x 25.1 x 10.9cm)
Ship Weight	9.4lbs (4.3kg)

\* Below 100°C ± 2°C. Environmental and sample conditions permitting.

Description	Electrical (50/60 Hz)	Part Number
Advanced Round Top Hotplate-Stirrer	120V   8.3 amps   500 watts	984TARSHSUSA
Advanced Round Top Hotplate-Stirrer	230V   4.6 amps   500 watts	984TARSHSEUA

## Round Top Hotplate-Stirrer Accessories

- Heat and stir a variety of samples simultaneously on one hotplate-stirrer
- Uni and sectional blocks accommodate 9 different sample sizes
- Anodized aluminum with close block to tube contact ensures optimal transfer of heat

The Talboys Multi-Sample Reaction Station enables you to heat and stir multiple samples of one size or up to five multiple sample blocks of different sizes, all with one unit. The base plate has a centrally located threaded opening to accommodate a 1/2" (13mm) support rod. Both block styles are offered in 9 different sample size configurations for vials and test tubes. Blocks are made of anodized aluminum to provide superior temperature stability and heat transfer. Each block has a thermometer well for measuring block temperature. Base plate is designed to fit on the Talboys Professional or Advanced Round Top Hotplate-Stirrers or other 135mm diameter top models. Safety handles are available to aid in the safe removal of the base plate with blocks.

### Uni-Blocks

#### Test Tubes

Sample Type	No. of Wells	Well Dia.	Well Depth	Part Number
12mm Tube	40	12.7mm	45.7mm;	984TAM12MMT
16mm Tube	32	17.5mm	45.7mm	984TAM16MMT
20mm Tube	32	20.5mm	45.7mm	984TAM20MMT
25mm Tube	24	25.4mm	41.9mm	984TAM25MMT

#### Vials

Sample Type	No. of Wells	Well Dia.	Well Depth	Part Number
12mm Vial (2mL)	40	12.7mm	16.8mm	984TAM12MMV
15mm Vial (1 dram)	40	15.5mm	16.8mm	984TAM15MMV
17mm Vial (2 dram)	32	17.8mm	16.8mm	984TAM17MMV
21mm Vial (4 dram)	24	21.5mm	16.8mm	984TAM21MMV
28mm Vial	16	28.8mm	16.8mm	984TAM28MMV

### Sectional Blocks

#### Test Tubes

Sample Type	No. of Wells	Well Dia.	Well Depth	Part Number
12mm Tube	9	12.7mm	45.7mm	984TAP12MMT
16mm Tube	8	17.5mm	45.7mm	984TAP16MMT
20mm Tube	6	20.5mm	45.7mm	984TAP20MMT
25mm Tube	5	25.4mm	41.9mm	984TAP25MMT

#### Vials

Sample Type	No. of Wells	Well Dia.	Well Depth	Part Number
12mm Vial (2mL)	9	12.7mm	16.8mm	984TAP12MMV
15mm Vial (1 dram)	10	15.5mm	16.8mm	984TAP15MMV
17mm Vial (2 dram)	7	17.8mm	16.8mm	984TAP17MMV
21mm Vial (4 dram)	5	21.5mm	16.8mm	984TAP21MMV
28mm Vial	3	28.8mm	16.8mm	984TAP28MMV

### Other Accessories

Description	Part Number
Base plate for 135mm diameter plates	984TABASEPLT
Safety Handles (2)	984TAHANDLES



## Basic Mini Hotplates, Stirrers &amp; Hotplate-Stirrers



- Hotplates & Hotplate-Stirrers boil 300mL of water in 12 minutes
- Ideal for educational labs
- Built in support rod holder

Talboys Basic Mini Hotplates, Stirrers, and Hotplate-Stirrers are rugged, compact units that heat and stir up to 1000mL of liquid. Durable, cast aluminum top plate will not crack or chip, and provides an even heating surface. Bi-metallic thermostat offers reliable temperature control. Powerful heater reaches maximum temperature in only minutes. Powerful motor and magnet deliver reliable and consistent stirring. Compact design saves bench space. Built-in support rod holder with locking knob accepts optional Support Rod and Clamp Kit.

Basic Mini Fixed Temperature Hotplate features an illuminated rocker switch to activate the preset fixed temperature of 400°C.

Basic Mini Auto-Stirrer is automatically activated by the minimum weight of ~50 grams (1.75oz) and will stop stirring when mixing vessel is removed.

**Operating Features:**

**Adjustment Knobs:** Basic speed and temperature control knobs with dial markings from 1 to 10.

**Operating Conditions:**

Units can be run in conditions from 5 to 40°C (41 to 104°F), 20% to 85% relative humidity, non-condensing.

**Applications:**

Academia and Basic chemistry.

**Ordering Information:**

Units include a 72" (183cm), 3-wire cord and plug (230 volt units are supplied with Euro type plug). Stirrers and Hotplate-Stirrers are supplied with a 1.5" (3.8cm) PTFE coated stir bar. Additional stir bars are available for stirring models on page 66. **5 year limited warranty on parts and labor.**



953202

**Specifications**

Temperature Range	to 400°C*
Speed Range	100 to 1200rpm
Speed Stability	± 2%
Maximum Capacity (H <sub>2</sub> O)	1000mL
Top Plate Dimensions (Dia.)	4.5" (11.4cm)
Overall Dimensions (L x W x H)	6.5 x 5.8 x 5.3" (16.5 x 14.7 x 13.5cm)
Ship Weight	4.5lbs (2kg)

\* Fixed Temperature Hotplate has a fixed temperature of 400°C.

**Basic Mini Hotplates**

Description	Electrical (50/60 Hz)	Part Number
Basic Mini Hotplate	120V   6.0 amps   565 watts	953201
Basic Mini Hotplate	230V   2.5 amps   430 watts	953205
Basic Mini Fixed Temperature Hotplate	120V   6.0 amps   565 watts	953203
Basic Mini Fixed Temperature Hotplate	230V   2.5 amps   430 watts	953208

**Basic Mini Stirrers**

Description	Electrical (50/60 Hz)	Part Number
Basic Mini Stirrer	120V   0.5 amps   20 watts	953200
Basic Mini Stirrer	230V   0.25 amps   20 watts	953204
Basic Mini Auto-Stirrer	120V   0.5 amps   20 watts	953207

**Basic Mini Hotplate-Stirrers**

Description	Electrical (50/60 Hz)	Part Number
Basic Mini Hotplate-Stirrer	120V   6.0 amps   565 watts	953202
Basic Mini Hotplate-Stirrer	230V   2.5 amps   430 watts	953206

- Powerful motor and magnet mix up to 25L of liquid
- Large top plate surface
- Microprocessor controls

Talboys Standard and Advanced High Volume Stirrers are designed for large capacity applications. Powerful magnet and motor offer exceptional magnetic coupling force capable of stirring 25L.

### Operating Features:

**Low Profile Design:** Takes up minimal space. Spill-resistant housing channels fluids away from internal components. Cast aluminum base offers durability and added stability.

**Glass Filled Nylon Top Plate:** Features a chemical resistant, reflective white top plate surface that is easy to clean.

**Large Top Plate:** Accommodates oversized vessels.

**Microprocessor Control:** Precisely regulates speed through the entire range. Stirring function, with continuous duty motor and magnet, maintains set speed even under changing load or viscosity.

**Adjustment Knob:** Basic speed control knob with dial markings from 1 to 10 (Standard Series).

**LED Display:** Touch pad controls with easy-to-read, independent LED displays for speed and time. Speed is adjustable in 10rpm increments. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero (Advanced Series).

### Safety Features:

**Audible Alarm:** In timed mode, alarm will sound when time reaches zero (Advanced Series).

**Speed Ramping Feature:** Slowly increases speed for improved safety and enhanced coupling. Avoids splashing, improves spin bar control and provides excellent low speed control.

### Operating Conditions:

Units can be run in conditions from 5 to 40°C (41 to 104°F), 20% to 80% relative humidity, non-condensing.

### Applications:

Carboys, chromatography, and large volume sample stirring.

### Ordering Information:

Units include a 92" (234cm) detachable, 3-wire cord and plug (230 volt units are supplied with Euro type plug). Units are also supplied with a 2.75" (7cm) PTFE coated stir bar. Additional stir bars are available on page 66. **5 year limited warranty on parts and labor.**

**Optional NIST Traceable Calibration Certificate** provided by Troemner's ISO/IEC 17025 accredited laboratory. Multiple data points within the speed range and time function are reported on the certificate with the associated uncertainties.



Specifications	
Speed Range	60 to 1400rpm
Speed Stability	60 to 250rpm +/-5rpm 250 to 1400rpm +/-2%
Timer (Advanced Series)	1 second to 160 hours
Maximum Capacity (H <sub>2</sub> O)	25L
Maximum Vessel Diameter	10" (25cm)
Top Plate Material	Glass filled nylon
Top Plate Dimensions (L x W)	12.5 x 11" (31.8 x 27.9cm)
Overall Dimensions (L x W x H)	17 x 11 x 4" (43.2 x 27.9 x 9.7cm)
Ship Weight	14.6lbs (6.6kg)

Description	Electrical (50/60 Hz)	Positions	Part Number
Standard High Volume Stirrer	120V   1.3 amps   75 watts	1	986366
Standard High Volume Stirrer	230V   0.65 amps   75 watts	1	986367
Advanced High Volume Stirrer	120V   1.3 amps   75 watts	1	986368
Advanced High Volume Stirrer	230V   0.65 amps   75 watts	1	986369
Advanced High Volume Stirrer with NIST Traceable Certificate	120V   1.3 amps   75 watts	1	986368-C
Advanced High Volume Stirrer with NIST Traceable Certificate	230V   0.65 amps   75 watts	1	986369-C

## Advanced Large Capacity Stirrers



- LED Displays for speed and time
- Durable, stainless steel construction
- Mixes up to 200L

Talboys Advanced Model 1000 and Model 2000 Large Capacity Stirrers are ideal for high volume applications. The powerful magnetic drive is capable of mixing high viscosity materials. Stainless steel base offers durability and added stability.

**Operating Features:**

**Microprocessor Control:** Precisely regulates speed through the entire range. Stirring function, with continuous duty motor and magnet, maintains set speed even under changing load or viscosity.

**LED Display:** Touch pad controls with easy-to-read, independent LED displays for speed and time. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero.

**Safety Features:**

**Audible Alarm:** In timed mode, alarm will sound when time reaches zero.

**Speed Ramping Feature:** Slowly increases speed for improved safety and enhanced coupling. Avoids splashing, improves spin bar control and provides excellent low speed control.

**Operating Conditions:**

Units can be run in conditions from 5 to 40°C (41 to 104°F), 20% to 80% relative humidity, non-condensing.

**Applications:**

Mixing viscous materials, polymers, and pilot scale.

**Ordering Information:**

Units include a 92" (234cm) detachable, 3-wire cord and plug (230 volt units are supplied with Euro type plug). Model 1000 units are supplied with a 2.75" (7cm) egg shaped PTFE coated stir bar, Model 2000 units are supplied with a 4" (10.2cm) PTFE coated stir bar with a pivot ring. Additional stir bars are available on page 66. **5 year limited warranty on parts and labor.**

**Optional NIST Traceable Calibration Certificate** provided by Troemner's ISO/IEC 17025 accredited laboratory. Multiple data points within the speed range and time function are reported on the certificate with the associated uncertainties.



986370

Specifications	
Speed Range	100 to 1800rpm (increased in 10 rpm increments)
Speed Stability	± 2%
Timer	1 second to 160 hours
Maximum Capacity (H <sub>2</sub> O)	
Model 1000	100L
Model 2000	200L
Maximum Weight Capacity	425lbs (193kg)
Top Plate Material	304 stainless steel
Top Plate Dimensions (L x W)	21.25 x 25" (54 x 53.5cm)
Overall Dimensions (L x W x H)	28.5 x 26.75 x 5.25" (72.4 x 68 x 13.3cm)
Ship Weight	71lbs (32.2kg)

Description	Electrical (50/60 Hz)	Part Number
Advanced Model 1000 Large Capacity Stirrer, 100L	120V   1.0 amps   41 watts	986370
Advanced Model 1000 Large Capacity Stirrer, 100L	230V   0.5 amps   41 watts	986371
Advanced Model 2000 Large Capacity Stirrer, 200L	120V   1.0 amps   82 watts	986372
Advanced Model 2000 Large Capacity Stirrer, 200L	230V   0.5 amps   82 watts	986373
Advanced Model 1000 Large Capacity Stirrer, 100L with NIST Traceable Certificate	120V   1.0 amps   41 watts	986370-C
Advanced Model 1000 Large Capacity Stirrer, 100L with NIST Traceable Certificate	230V   0.5 amps   41 watts	986371-C
Advanced Model 2000 Large Capacity Stirrer, 200L with NIST Traceable Certificate	120V   1.0 amps   82 watts	986372-C
Advanced Model 2000 Large Capacity Stirrer, 200L with NIST Traceable Certificate	230V   0.5 amps   82 watts	986373-C

- Stirs up to 9 vessels at once
- Synchronized and uniform mixing
- Low profile design

Talboys Standard and Advanced Multi-Position Stirrers are powerful magnetic stirrers with precise speed control that offer repeatable performance. Synchronized operation ensures uniform mixing at each position.

#### Operating Features:

**Low Profile Design:** Takes up minimal space. Spill-resistant housing channels fluids away from internal components. Cast aluminum base offers durability and added stability.

**Glass Filled Nylon Top Plate:** Features a chemical resistant, reflective white top plate surface that is easy to clean.

**Large Top Plate:** Stirs up to 9 vessels at once with helpful position indicators.

**Microprocessor Control:** Precisely regulates speed through the entire range. Stirring function, with continuous duty motor and magnet, maintains set speed even under changing load or viscosity.

**Adjustment Knob:** Basic speed control knob with dial markings from 1 to 10 (Standard Series).

**LED Display:** Touch pad controls with easy-to-read, independent LED displays for speed and time. Speed is adjustable in 10rpm increments. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero (Advanced Series).

#### Safety Features:

**Speed Ramping Feature:** Slowly increases speed for improved safety and enhanced coupling. Avoids splashing, improves spin bar control and provides excellent low speed control.

**Audible Alarm:** In timed mode, alarm will sound when time reaches zero (Advanced Series).

#### Operating Conditions:

Units can be run in conditions from 5 to 40°C (41 to 104°F), 20% to 80% relative humidity, non-condensing.

#### Applications:

Dissolution studies, media/reagent preparations, and titration studies.

#### Ordering Information:

Units include a 92" (234cm) detachable, 3-wire cord and plug (230 volt units are supplied with Euro type plug). Units are also supplied with a 1" (2.5cm) PTFE coated stir bar for each position. Additional stir bars are available on page 66. **5 year limited warranty on parts and labor.**

**Optional NIST Traceable Calibration Certificate** provided by Troemner's ISO/IEC 17025 accredited laboratory. Multiple data points within the speed range and time function are reported on the certificate with the associated uncertainties.

986350



986364



#### Specifications

Speed Range	60 to 1400rpm
Speed Stability	60 to 250rpm +/-5rpm 250 to 1400rpm +/-2%
Timer (Advanced Series)	1 second to 160 hours
Top Plate Material	Glass filled nylon
Top Plate Dimensions (L x W)	12.5 x 11" (31.8 x 27.9cm)
Overall Dimensions (L x W x H)	17 x 11 x 4" (43.2 x 27.9 x 9.7cm)
Ship Weight	14.75lbs (6.7kg)

## Standard &amp; Advanced Multi-Position Stirrers

## Standard Multi-Position Stirrers

Description	Electrical (50/60 Hz)	Positions	Maximum Capacity H <sub>2</sub> O*	Maximum Vessel Diameter	Part Number
Standard Multi-Position Stirrer 4	120V   1.3 amps   85 watts	4	1L	5.1" (13cm)	986350
Standard Multi-Position Stirrer 4	230V   0.65 amps   85 watts	4	1L	5.1" (13cm)	986351
Standard Multi-Position Stirrer 5	120V   1.3 amps   85 watts	5	600mL	3.75" (9.5cm)	986354
Standard Multi-Position Stirrer 5	230V   0.65 amps   85 watts	5	600mL	3.75" (9.5cm)	986355
Standard Multi-Position Stirrer 6	120V   1.3 amps   85 watts	6	400mL	3.2" (8cm)	986358
Standard Multi-Position Stirrer 6	230V   0.65 amps   85 watts	6	400mL	3.2" (8cm)	986359
Standard Multi-Position Stirrer 9	120V   1.3 amps   85 watts	9	250mL	3" (7.5cm)	986362
Standard Multi-Position Stirrer 9	230V   0.65 amps   85 watts	9	250mL	3" (7.5cm)	986363

## Advanced Multi-Position Stirrers

Description	Electrical (50/60 Hz)	Positions	Maximum Capacity H <sub>2</sub> O*	Maximum Vessel Diameter	Part Number
Advanced Multi-Position Stirrer 4	120V   1.3 amps   85 watts	4	1L	5.1" (13cm)	986352
Advanced Multi-Position Stirrer 4	230V   0.65 amps   85 watts	4	1L	5.1" (13cm)	986353
Advanced Multi-Position Stirrer 5	120V   1.3 amps   85 watts	5	600mL	3.75" (9.5cm)	986356
Advanced Multi-Position Stirrer 5	230V   0.65 amps   85 watts	5	600mL	3.75" (9.5cm)	986357
Advanced Multi-Position Stirrer 6	120V   1.3 amps   85 watts	6	400mL	3.2" (8cm)	986360
Advanced Multi-Position Stirrer 6	230V   0.65 amps   85 watts	6	400mL	3.2" (8cm)	986361
Advanced Multi-Position Stirrer 9	120V   1.3 amps   85 watts	9	250mL	3" (7.5cm)	986364
Advanced Multi-Position Stirrer 9	230V   0.65 amps   85 watts	9	250mL	3" (7.5cm)	986365
Advanced Multi-Position Stirrer 4 with NIST Traceable Certificate	120V   1.3 amps   85 watts	4	1L	5.1" (13cm)	986352-C
Advanced Multi-Position Stirrer 4 with NIST Traceable Certificate	230V   0.65 amps   85 watts	4	1L	5.1" (13cm)	986353-C
Advanced Multi-Position Stirrer 5 with NIST Traceable Certificate	120V   1.3 amps   85 watts	5	600mL	3.75" (9.5cm)	986356-C
Advanced Multi-Position Stirrer 5 with NIST Traceable Certificate	230V   0.65 amps   85 watts	5	600mL	3.75" (9.5cm)	986357-C
Advanced Multi-Position Stirrer 6 with NIST Traceable Certificate	120V   1.3 amps   85 watts	6	400mL	3.2" (8cm)	986360-C
Advanced Multi-Position Stirrer 6 with NIST Traceable Certificate	230V   0.65 amps   85 watts	6	400mL	3.2" (8cm)	986361-C
Advanced Multi-Position Stirrer 9 with NIST Traceable Certificate	120V   1.3 amps   85 watts	9	250mL	3" (7.5cm)	986364-C
Advanced Multi-Position Stirrer 9 with NIST Traceable Certificate	230V   0.65 amps   85 watts	9	250mL	3" (7.5cm)	986365-C

\* Maximum capacity per position

- Ideal for cell culture applications
- Slow start/stop feature
- Efficient drive motor eliminates heat transfer to sample

Talboys Standard and Advanced Slow Speed Stirrers are designed for growth of suspension and micro-carrier cell cultures. Slow Speed Stirrers work with cell culture flasks and other vessels designed for slow magnetic stirring. Ideal for use in cold rooms, incubator, or CO<sub>2</sub> incubators (-10°C to 40°C), 20% to 80% relative humidity, non condensing environment.

### Operating Features:

**Low Profile Design:** Takes up minimal space and easily fits into fume hoods and most incubators. Spill-resistant housing channels fluids away from internal components. Cast aluminum base offers durability and added stability.

**Glass Filled Nylon Top Plate:** Features a chemical resistant, reflective white top plate surface that is easy to clean (4 position and 10L models).

**Aluminum Top Plate:** Durable aluminum top will not crack or chip. (1 position models)

**Large Top Plate:** Stirs up to 4 vessels at once with helpful position indicators.

**Microprocessor Control:** Precisely regulates speed through the entire range. Stirring function, with continuous duty motor and magnet, maintains set speed even under changing load or viscosity.

**Adjustment Knob:** Basic speed control knob with dial markings from 1 to 10 (Standard Series).

**LED Display:** Touch pad controls with easy-to-read, independent LED displays for speed and time. Speed is adjustable in 1rpm increments. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero (Advanced Series).

### Safety Features:

**Speed Ramping Feature:** Slowly increases speed for improved safety and enhanced coupling. Avoids splashing, improves spin bar control and provides excellent low speed control.

**Audible Alarm:** In timed mode, alarm will sound when time reaches zero (Advanced Series).

### Operating Conditions:

Units can be run in cold rooms, incubators, and CO<sub>2</sub> environments from -10 to 40°C (14 to 104°F), 20% to 80% relative humidity, non-condensing.

### Applications:

Uniform suspensions of cell cultures, hybridomas, or any slow controlled stirring.

### Ordering Information:

Units include a 92" (234cm) detachable, 3-wire cord and plug (230 volt units are supplied with Euro type plug). **5 year limited warranty on parts and labor.**

**Optional NIST Traceable Calibration Certificate** provided by Troemner's ISO/IEC 17025 accredited laboratory. Multiple data points within the speed range and time function are reported on the certificate with the associated uncertainties.



986374



986382

### Specifications

Speed Range	1 to 150rpm
Timer (Advanced Series)	1 second to 160 hours
Top Plate Material	Glass filled nylon
4 Position / 10L	Aluminum
1 Position	
Top Plate Dimensions (L x W)	
4 Position / 10L	12.5 x 11" (31.8 x 27.9cm)
1 Position	7 x 7" (17.8 x 17.8cm)
Overall Dimensions (L x W x H)	
4 Position / 10L	17 x 11 x 4" (43.2 x 27.9 x 10.2cm)
1 Position	12.1 x 8.5 x 4" (30.7 x 21.6 x 9.9cm)
Ship Weight	
4 Position / 10L	14.5lbs (6.6kg)
1 Position	8.8lbs (4kg)



## Standard &amp; Advanced Slow Speed Stirrers

## Standard Slow-Speed Stirrers

Description	Electrical (50/60 Hz)	Positions	Maximum Capacity H <sub>2</sub> O*	Maximum Vessel Diameter	Part Number
Standard Slow Speed Stirrer 1	120V   0.14 amps   7.2 watts	1	2L	5.9" (15cm)	986374
Standard Slow Speed Stirrer 1	230V   0.14 amps   14.4 watts	1	2L	5.9" (15cm)	986375
Standard Slow Speed Stirrer 4	120V   0.14 amps   7.2 watts	4	1L	5.1" (13cm)	986380
Standard Slow Speed Stirrer 4	230V   0.14 amps   14.4 watts	4	1L	5.1" (13cm)	986381

## Advanced Slow-Speed Stirrers

Description	Electrical (50/60 Hz)	Positions	Maximum Capacity H <sub>2</sub> O*	Maximum Vessel Diameter	Part Number
Advanced Slow Speed Stirrer 1	120V   0.14 amps   7.2 watts	1	2L	5.9" (15cm)	986376
Advanced Slow Speed Stirrer 1	230V   0.14 amps   14.4 watts	1	2L	5.9" (15cm)	986377
Advanced Slow Speed Stirrer 4	120V   0.14 amps   7.2 watts	4	1L	5.1" (13cm)	986382
Advanced Slow Speed Stirrer 4	230V   0.14 amps   14.4 watts	4	1L	5.1" (13cm)	986383
Advanced Slow Speed Stirrer 10L	120V   0.14 amps   7.2 watts	1	10L	9.8" (25cm)	986378
Advanced Slow Speed Stirrer 10L	230V   0.14 amps   14.4 watts	1	10L	9.8" (25cm)	986379
Advanced Slow Speed Stirrer 1 with NIST Traceable Certificate	120V   0.14 amps   7.2 watts	1	2L	5.9" (15cm)	986376-C
Advanced Slow Speed Stirrer 1 with NIST Traceable Certificate	230V   0.14 amps   14.4 watts	1	2L	5.9" (15cm)	986377-C
Advanced Slow Speed Stirrer 4 with NIST Traceable Certificate	120V   0.14 amps   7.2 watts	4	1L	5.1" (13cm)	986382-C
Advanced Slow Speed Stirrer 4 with NIST Traceable Certificate	230V   0.14 amps   14.4 watts	4	1L	5.1" (13cm)	986383-C
Advanced Slow Speed Stirrer 10L with NIST Traceable Certificate	120V   0.14 amps   7.2 watts	1	10L	9.8" (25cm)	986378-C
Advanced Slow Speed Stirrer 10L with NIST Traceable Certificate	230V   0.14 amps   14.4 watts	1	10L	9.8" (25cm)	986379-C

\* Maximum capacity per position

- Mixes up to 1500mL of water; easily stirs 100% glycerol at 20°C
- Safe, low voltage DC operation
- Electronic speed control

Compact, submersible magnetic stirrer is housed in a sealed, nickel-plated brass case mounted on a solid brass base. A 38" (96.5cm) cable connects the power supply to the stirring unit. Stirrer operates on low voltage DC and is safety fused on DC side for safe operation underwater. Unit is easily mounted to rod supports or laboratory frames with standard mounting bracket on rear of power supply. Can also be used as a mini-stirrer in lattice work.

### Ordering Information:

Unit is supplied with a 1.5" (3.8cm) PTFE coated stir bar. **5 year limited warranty on parts and labor.**



952021

Specifications	
Speed Range	60 to 2000rpm
Maximum Capacity	1500mL
Power	20 watts
Dimensions, Stirrer (Dia. x H)	2.75 x 2.75" (7 x 7cm)
Dimensions, Power Supply (L x W x H)	5 x 4 x 3.5" (12.7 x 10.2 x 8.9cm)
Ship Weight	2lbs (0.9kg)

Description	Electrical (50/60 Hz)	Part Number
Submersible Stirrer-Model 700	120V   0.16 amps   20 watts	952021

## HOTPLATE-STIRRER ACCESSORIES

### Stir Bars - PTFE coated

Description	Size	Recommended for Unit	Part Number
Stir bar	1" (2.5cm)	Multi-Position Stirrers	985670
Stir bar	1.5" (3.8cm)	Basic Stirrers, Hotplate-Stirrers, Professional & Advanced Stirrers, Hotplate-Stirrers	985671
Stir bar (egg shaped)	2.75" (7cm)	High Volume Stirrers, Model 1000 Large Capacity Stirrer	985672
Stir bar with pivot ring	4" (10.2cm)	Model 2000 Large Capacity Stirrer	985673
Replacement pivot ring for 4" (10.2cm) stir bar			985674

### Temperature Probes

Description	Part Number
8" (20.3 cm) Stainless Steel Probe	984TA8SPROBE
8" (20.3 cm) PTFE Probe	984TA8PPROBE
10" (25.4 cm) Stainless Steel Probe	984TA10SPROB
10" (25.4 cm) PTFE Probe	984TA10PPROB
Replacement Probe Kit with 8" (20.3cm) Stainless Steel Probe	984TAPROBKIT

## Supports

**Ultra Flex Support Kit**

Extremely versatile with a unique flex arm that can be placed in virtually every position or angle. Includes 12" (30.5cm) flex arm and interchangeable 3-prong clamp head, 2-prong clamp head and spring clamp head.

Recommended for all Hotplates or Hotplate-Stirrers.

Description	Part Number
Ultra Flex Support Kit	985797

Ultra Flex Support Kit Includes:



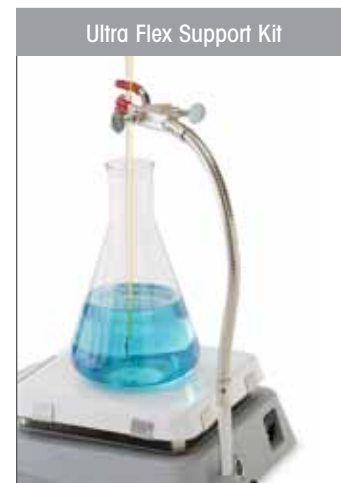
3-Prong Clamp Head



2-Prong Clamp Head



Spring Clamp Head

**Support Rod and Clamp Kit**

Designed for holding temperature probes, thermometers or other glass tubes. Includes an 18" (45.7cm) stainless steel support rod, thermometer/temperature probe extension clamp, 3-prong medium swivel clamp, and hook connector.

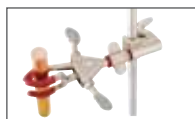
Recommended for all Hotplates or Hotplate-Stirrers.

Description	Part Number
Support Rod and Clamp Kit	985690

Support Rod and Clamp Kit Includes:



Extension Clamp



3-Prong Swivel Clamp



Hook Connector

**Support Plates**

Designed to hold Hotplates/Stirrers and other apparatus to lab-frames or ring stands. Aluminum construction offers strength and durability. Support plates include a non-skid rubber mat and can mount to vertical rods up to 0.75" (1.9cm) in diameter.

**Small Support Plate** recommended for Advanced 4 x 4 or Basic Hotplates, Stirrers or Hotplate-Stirrers.

**Medium Support Plate** recommended for Professional or Advanced 7 x 7 Hotplates, Stirrers or Hotplate-Stirrers.

**Large Support Plate** recommended for multiple units.

Size	Dimensions	Part Number
Small	9.5 x 6.5" (24.1 x 16.5cm)	916299
Medium	12.75 x 9.0" (32.4 x 22.9cm)	916300
Large	15.75 x 12.0" (40 x 30.5cm)	916302

