

# Hotplate & Magnetic Stirrer

## Digital type



## Precise control based on sample temperature

### Structural Functional Features

- Includes temperature probe (B class) as standard.
- Displays external temperature sensor errors.
- Top plate coated with white ceramic for excellent corrosion resistance.
- Excellent heat transfer and durability due to heater-integrated structure.
- Using special permanent magnets for maintaining stirring ability.

### Use Convenience Features

- Precise temperature/stirring control with PID feedback control.
- Temperature control mode selection function. (Optimal/Fast/Slow/User/Point)
- Includes temperature auto-tuning and calibration functions.
- Count-down timer provided. (up to 99 hours and 59 minutes)
- Clamp Rod (option) can be added to the main body fix other experiment equipment.
- Convenient experiment observation with removable transparent shield. (option)

### Outstanding Safety

- Spill-proof design minimizes inflow solution into device.
- Safety ensured by BLDC motor that does not generate sparks.
- Preventing equipment failure with multiple over temperature prevention devices.
- Warning displayed when top plate is 50°C or more.
- Prevents sample run-off thanks to smooth stirring start.
- The heating bath (option) is combined with the top plate to ensure safety. (except TS-Q)



**TS-18QG**

with 3 Prong Clamp, Clamp Rod (option)



**TS-17SG**

## Specification

| Model                                      |                                       | TS-14SG                               | TS-17SG                               | TS-18QG                              |
|--|---------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|
| Heating                                    | Temperature range (°C /°F)            | Top plate, Max, 350 / 662             | Top plate, Max, 350 / 662             | Top plate, Max, 350 / 662            |
|  | Control mode                          | PID Feedback (optimal, fast, slow)    | PID Feedback (optimal, fast, slow)    | PID Feedback (optimal, fast, slow)   |
|  | Display resolution (°C /°F)           | 0.1 / 32.18                           | 0.1 / 32.18                           | 0.1 / 32.18                          |
| Stirring                                   | Speed range (rpm)                     | 30 to 2000                            | 30 to 2000                            | 30 to 2000                           |
|  | Capacity (H <sub>2</sub> O, L)        | 20                                    | 20                                    | 20                                   |
|  | Magnetic bar, Max. (L x Ø, mm / inch) | 40 x 8 / 0.31 x 1.57                  | 40 x 8 / 0.31 x 1.57                  | 40 x 8 / 0.31 x 1.57                 |
| Material                                   | Top plate                             | White ceramic coated aluminum alloy   | White ceramic coated aluminum alloy   | White ceramic coated aluminum alloy  |
|  | Body                                  | Powder coated aluminum alloy          | Powder coated aluminum alloy          | Powder coated aluminum alloy         |
|  | Motor type                            | BLDC (Brushless Direct Current)       | BLDC (Brushless Direct Current)       | BLDC (Brushless Direct Current)      |
|  | Temperature probe                     | PT 100 (B class, Max. 250°C ,482°F)   | PT 100 (B class, Max. 250°C ,482°F)   | PT 100 (B class, Max. 250°C ,482°F)  |
| Dimensions                                 | Top plate (Ø or W x D, mm / inch)     | 140 / 5.51                            | 170 / 6.69                            | 180 x 180 / 7.08 x 7.08              |
|  | Exterior (W x D x H, mm / inch)       | 161 x 290 x 100 / 6.34 x 11.42 x 3.94 | 191 x 330 x 101 / 7.52 x 12.99 x 3.98 | 209 x 326 x 102 / 8.22 x 12.83 x 4.0 |
|  | Net weight (kg / lbs)                 | 2.8 / 6.17                            | 3.5 / 7.71                            | 3.8 / 8.36                           |
| Timer (Heating and/or Stirring)            |                                       | Max. 99 hrs 59 min.                   | Max. 99 hrs 59 min.                   | Max. 99 hrs 59 min.                  |
| Electrical requirements (230V, 50/60Hz, A) |                                       | 3.0                                   | 4.0                                   | 4.0                                  |
| Cat. No.                                   |                                       | <b>AAH34445K</b>                      | <b>AAH34475K</b>                      | <b>AAH34485K</b>                     |
| Electrical requirements (120V/60Hz, A)     |                                       | 5.0                                   | 6.7                                   | 6.7                                  |
| Cat. No.                                   |                                       | <b>AAH34443U</b>                      | <b>AAH34473U</b>                      | <b>AAH34483U</b>                     |

※ Except TS-18Q CSA certification ※ Except TS-17S, 18Q RoHS certification.

**Accessories** Page 133 Temperature Probe, Heating Bath, Clamp Rod, Clamp, Transparent Shield