



# GUARDIAN™ 5000

Hotplate Stirrers



## *Expertly Engineered Hotplate Stirrers with Premium Safety and Versatility Features for Everyday Use*

The Next Generation Guardian™ 5000 Hotplate Stirrers are engineered for safety and versatility across research, academic and industrial settings. They offer powerful heating and mixing, with premium hardware and software to support diverse users safely and reliably. Heating models reach up to 550 °C and feature 3 temperature control modes for quick heating or precise heating without overshoot. Select from 5 models with 3 plate sizes.

### *Unique Features:*

- Our signature SafetyHeat™ and SmartHeat™ features combined with the new Run Dry Protection system plus the Time Run mode and the optional Splash Shield provide complete safety.
- The evolved SmartRate™ system supports heating & stirring from fast and intensive to soft and precise, with a range of accessories to empower a variety of applications.
- An intuitive user interface featuring a large, bright LCD screen with white characters & knob button(s), allows for user friendly operation. RS232 port included for remote control or data logging.

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## SmartHeat™

User is able to adjust Set Temperature upper limit of the Top Plate, from 0 °C to Rated Max Temperature

## SmartRate™

User is able to select the speed or temperature ramping rate



## SafetyHeat™

Industry-leading early detection system that uses two independent safety controls to continuously monitor the electronics and shut off heating before an overtemperature condition occurs.

## Run Dry Protection System

Shuts off heating and alarms, if a probe-controlled heating is running without the probe tip submerged in the heating medium.

## Specifications

| Model                                    | e-G52HSRDA                                                                              | e-G52HS10C                           | e-G52HS07C                            | e-G52HP07C      | e-G52ST07C                           |
|------------------------------------------|-----------------------------------------------------------------------------------------|--------------------------------------|---------------------------------------|-----------------|--------------------------------------|
| Kit Model***                             | e-G52HSRDA - K1                                                                         | e-G52HS10C - K1                      | e-G52HS07C - K1                       | e-G52HP07C - K1 | --                                   |
| Function                                 | Heating and Stirring                                                                    |                                      |                                       | Heating         | Stirring                             |
| Top Plate Size                           | Ø 13.5 cm                                                                               | 26 x 26 cm                           | 18 x 18 cm                            |                 |                                      |
| Top Plate Material                       | Ceramic Coated Aluminum                                                                 | Ceramic                              |                                       |                 |                                      |
| Housing Material                         | Painted Aluminum                                                                        |                                      |                                       |                 |                                      |
| Display                                  | 115 x 30 mm White Character LCD                                                         |                                      |                                       |                 |                                      |
| Timer                                    | 1 minute to 99 hours 59 minutes                                                         |                                      |                                       |                 |                                      |
| Temperature Range                        | Ambient + 5 °C – 360 °C                                                                 | Ambient + 5 °C – 500 °C              | Ambient + 5 °C – 550 °C               |                 | --                                   |
| Temperature Increments & Readability     | 0.5 °C                                                                                  |                                      |                                       |                 | --                                   |
| Temperature Stability*                   | +/-1 % Plate, below 100 °C +/-1 °C<br>and +/-0.5 % Probe, below 100 °C +/-0.5 °C        |                                      |                                       |                 | --                                   |
| Temperature Calibration (SPC) Set Points | 3 points for Plate and 3 points for Probe                                               |                                      |                                       |                 | --                                   |
| Probe Connection                         | PT100, PT1000 (Class A)                                                                 |                                      |                                       |                 | --                                   |
| Probe Temperature Measurement Accuracy   | ±0.2 °C + PT1000 (Class A) Tolerance**                                                  |                                      |                                       |                 | --                                   |
| Heating Power                            | 600 W at 120 V<br>656 W at 230 V                                                        | 1650 W at 120 V<br>2066 W at 230 V   | 1582 W at 120 V<br>1050 W at 230 V    |                 | --                                   |
| Speed Range                              | 50 - 1800 rpm                                                                           |                                      |                                       | --              | 50 - 1800 rpm                        |
| Speed Stability*                         | +/-2 %                                                                                  |                                      |                                       | --              | +/-2 %                               |
| Stirring Capacity (H <sub>2</sub> O)     | 20 L                                                                                    | 22 L                                 | 20 L                                  | --              | 20 L                                 |
| Data Logging & Remote Control            | built-in RS232; optional RS232-USB interface kit; optional RS232-Ethernet interface kit |                                      |                                       |                 |                                      |
| IP Rating                                | IP32                                                                                    |                                      |                                       |                 |                                      |
| Dimensions (L x W x H)                   | 259 x 175 x 108 mm                                                                      | 402 x 287 x 118 mm                   | 329 x 221 x 116 mm                    |                 |                                      |
| Working Environment                      | 5 °C – 40 °C, 80 %RH, non-condensing                                                    |                                      |                                       |                 |                                      |
| Basic Model Net Weight                   | 2.6 kg                                                                                  | 6.7 kg                               | 4.6 kg                                | 3.9 kg          | 4.5 kg                               |
| Electrical (50/60 Hz)                    | 100 - 120 V, 8 A<br>220 - 240 V, 4 A                                                    | 100 - 120V, 15 A<br>220 - 240V, 10 A | 100 - 120 V, 15 A<br>220 - 240 V, 7 A |                 | 100 - 120 V, 1 A<br>220 - 240 V, 1 A |

\* Conditions permitting. Variations in temperature and speed measurement processes, vessel, ambient and sample will impact actual performance. To improve temperature accuracy of the system use the Single Point Calibration feature.

\*\*PT1000 Class A Tolerance:  $\pm(0.15\text{ °C} + 0.002 \times T\text{ °C})$ , T is Set Temperature

\*\*\* Kit-1 ("K1") has the Temperature Probe 30500590 and the Probe Holder Kit 30973298 included in package.

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## Accessories

| Item No.    | Description                             | e-G52HSRDA | e-G52HS10C | e-G52HS07C | e-G52HP07C | e-G52ST07C |
|-------------|-----------------------------------------|------------|------------|------------|------------|------------|
| 30973654    | Probe PT100(A) -40~400C 25cm SS316/304  | ●          | ●          | ●          | ●          |            |
| 30500590    | Probe PT1000(A) -40~400C 20cm SS316/304 | ●          | ●          | ●          | ●          |            |
| 30500592    | Probe PT1000(A) -40~400C 25cm SS316/304 | ●          | ●          | ●          | ●          |            |
| 30973655    | Probe PT1000(A) -40~400C 25cm Hastelloy | ●          | ●          | ●          | ●          |            |
| 30500591    | Probe PT1000(A) -40~200C 20cm PTFE      | ●          | ●          | ●          | ●          |            |
| 30500593    | Probe PT1000(A) -40~200C 25cm PTFE      | ●          | ●          | ●          | ●          |            |
| 30304101    | Interface Kit, RS232-USB                | ●          | ●          | ●          | ●          | ●          |
| 30304102    | Interface Kit, RS232-Ethernet           | ●          | ●          | ●          | ●          | ●          |
| 30973298    | Probe Holder Kit-1                      | ●          | ●          | ●          | ●          | ●          |
| 30983667    | Connecting Clamp S/S Grip 13mm & 13mm   | ●          | ●          | ●          | ●          | ●          |
| 30983668    | Support Rod S/S D13 x L450 mm THR.M10   | ●          | ●          | ●          | ●          | ●          |
| 30400145*   | Ultra Flex Support Kit                  | ●          | ●          | ●          | ●          | ●          |
| 30400146    | Support Rod And Clamp Kit               | ●          | ●          | ●          | ●          | ●          |
| 30400147    | Spinbar 2.5 cm PTFE                     | ●          | ●          | ●          |            | ●          |
| 30400148    | Spinbar 3.8 cm PTFE                     | ●          | ●          | ●          |            | ●          |
| 30400149    | Spinbar 7 cm PTFE                       | ●          | ●          | ●          |            | ●          |
| 30400150    | Spinbar 10 cm with Pivot Ring PTFE      | ●          | ●          | ●          |            | ●          |
| 30726783**  | Spinbar with a Pivot 3.8 cm PTFE        | ●          | ●          | ●          |            | ●          |
| 30500598    | Stir Bar Retriever                      | ●          | ●          | ●          |            | ●          |
| 30392195    | Clamp, Holder, CLC-CLMPHA               | ●          | ●          | ●          | ●          | ●          |
| 30500597    | Vessel Clamp                            | ●          | ●          | ●          | ●          | ●          |
| 30392314    | Clamp, Specialty, Column, CLS-COLMNSS   | ●          | ●          | ●          | ●          | ●          |
| 30392315    | Clamp, Specialty, Column, CLS-COLMNSM   | ●          | ●          | ●          | ●          | ●          |
| 30392316    | Clamp, Specialty, Column, CLS-COLMNSL   | ●          | ●          | ●          | ●          | ●          |
| 30392317    | Clamp, Specialty, Column, CLS-COLMNSX   | ●          | ●          | ●          | ●          | ●          |
| 30392318    | Clamp, Specialty, Nester, CLS-NESTXS    | ●          | ●          | ●          | ●          | ●          |
| 30910731    | Splash Shield for e-G52XX07C            |            |            | ●          | ●          | ●          |
| 30910732    | Splash Shield for e-G52HS10C            |            | ●          |            |            |            |
| 30910733    | Splash Shield for e-G52HSRDA            | ●          |            |            |            |            |
| 30910734    | Silicone Cover for e-G52HSRDA           | ●          |            |            |            |            |
| 30500570    | Base Plate 135 mm                       | ●          |            |            |            |            |
| 30500571    | Handles for Base Plate                  | ●          |            |            |            |            |
| 30500572    | Sectional Block 12 mm Vials             | ●          | ●          | ●          | ●          |            |
| 30500573    | Sectional Block 15 mm vials             | ●          | ●          | ●          | ●          |            |
| 30500574    | Sectional Block 17 mm Vials             | ●          | ●          | ●          | ●          |            |
| 30500575    | Sectional Block 21 mm Vials             | ●          | ●          | ●          | ●          |            |
| 30500576    | Sectional Block 28 mm Vials             | ●          | ●          | ●          | ●          |            |
| 30500577    | Sectional Block 12 mm Test Tubes        | ●          | ●          | ●          | ●          |            |
| 30500578    | Sectional Block 16 mm Test Tubes        | ●          | ●          | ●          | ●          |            |
| 30500579    | Sectional Block 20 mm Test Tubes        | ●          | ●          | ●          | ●          |            |
| 30500580    | Sectional Block 25 mm Test Tubes        | ●          | ●          | ●          | ●          |            |
| 30500581    | Uni Block 12 mm Vials                   | ●          | ●          | ●          | ●          |            |
| 30500582    | Uni Block 15 mm vials                   | ●          | ●          | ●          | ●          |            |
| 30500583    | Uni Block 17 mm Vials                   | ●          | ●          | ●          | ●          |            |
| 30500584    | Uni Block 21 mm Vials                   | ●          | ●          | ●          | ●          |            |
| 30500585    | Uni Block 28 mm Vials                   | ●          | ●          | ●          | ●          |            |
| 30500586    | Uni Block 12 mm Test Tubes              | ●          | ●          | ●          | ●          |            |
| 30500587    | Uni Block 16 mm Test Tubes              | ●          | ●          | ●          | ●          |            |
| 30500588    | Uni Block 20 mm Test Tubes              | ●          | ●          | ●          | ●          |            |
| 30500589    | Uni Block 25 mm Test Tubes              | ●          | ●          | ●          | ●          |            |
| 30392233*** | Clamp, Specialty, Rod, CLS-RODS         | ●          |            |            |            |            |

\*30400145 needs a separate double clamp or hook clamp for securing on Guardian 5000

\*\*30726783 pack of 5 spinbars

\*\*\*30392233 is for use with the 30500570 Base Plate only

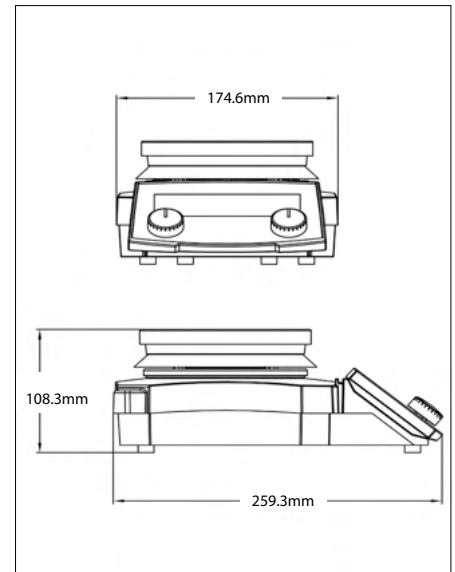
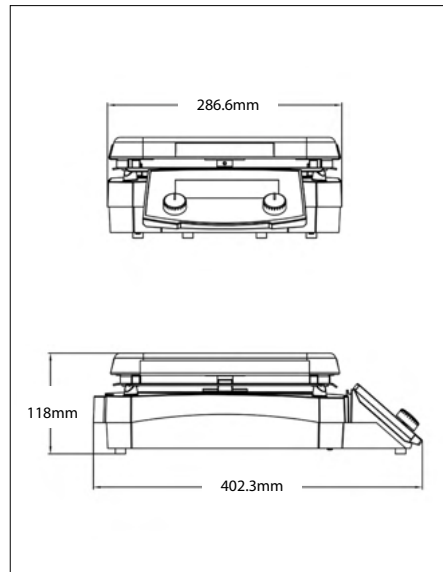
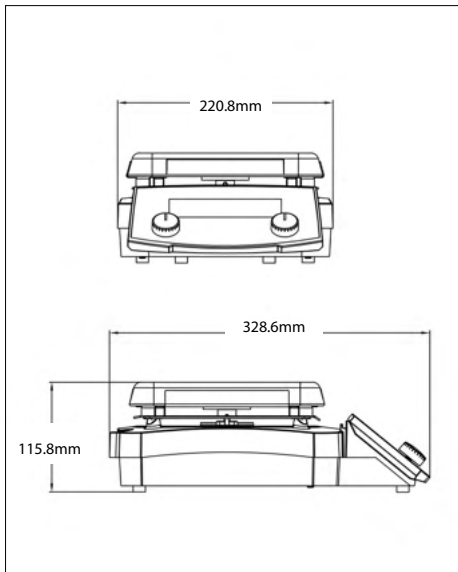
# GUARDIAN™ 5000 Hotplate Stirrers

## Outline Dimensions

e-G52HS07C, e-G52HP07C, e-G52ST07C

e-G52HS10C

e-G52HSRDA



## Other Features and Equipment

ON/OFF switch, Green indicator lights when unit is heating and stirring, probe in use icon, Single Point Calibration icon, rotary switch knob control, 2x built-in support rod holders, text and symbol HOT caution indicators, large dip angle front panel for easy monitoring from a distance, smooth enclosure surfaces for easy cleaning, audible alarm, IP32 Ingress Protection, robust full metal housing, ceramic square top plate or ceramic-coated aluminum round top plate, high performance SmCo magnet.

## Compliance

- **Product Safety:** IEC/EN 61010-1; IEC/EN 61010-2-010; IEC/EN 61010-2-051; CAN/CSA C22.2 61010-1; CAN/CSA C22.2 61010-2-010; CAN/CSA C22.2 61010-2-051; UL 61010-1; UL 61010-2-010; UL 61010-2-051;
- **Electromagnetic Compatibility:** IEC/EN 61326-1 Class A, Industrial environments; Canada ICES-003 Class A; FCC Part 15 Class A
- **Compliance Marks:** TÜV SÜD; CE; UKCA; RCM; WEEE
- **Other:** IP32

## Download Datasheets of our Clamps, Frames and Lab Lifts:

Click the image or use the QR code



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OHAUS Asia/Pacific Headquarters

e-mail: [APmarketing@ohaus.com](mailto:APmarketing@ohaus.com)  
Tel: +86 21 64855408

With offices throughout Europe, Asia, and Latin America

\* ISO 9001:2015

Registered Quality Management System

