

## MS-H-S

### Classic Magnetic Hotplate Stirrer

#### Features:

#### Safe Heating and Mixing

- Temperature up to 340°C
- Stirring speed up to 1500rpm
- Stainless steel with ceramic coated hotplate allows immediate heat transfer for quick heat-up times, chemical-resistant and scratch proof
- Separated safety circuit, automatically stops heating if temperature goes over 350°C
- Enclosed assembly with protection class IP42
- Brushless DC motor maintenance free and explosion-proof



## MS-H280-Pro

### LED Digital Magnetic Hotplate Stirrer

#### Features:

- Digital control system is ideal for applications of Analytical and biological Laboratory.
- Temperature up to 280°C
- Electronic speed control, the max speed is 1500rpm.
- Stainless steel with ceramic coated hotplate allows immediate heat transfer for quick heat-up times, chemical-resistant and scratchproof
- External temperature sensor PT1000 is available and control accuracy of  $\pm 0.5^\circ\text{C}$ , real-time control medium temperature.
- LED display temperature and speed.
- 50°C HOT warning indicates residual hotplate temperature.
- ABS casing with fire retardant material, resistance of weak acid and alkali



#### MS-H280-Pro

With external temperature sensor PT1000


**MS7-H550-Pro**
**MS7-H550-S**
**MS-H-Pro<sup>+</sup>**
**MS-H-Pro<sup>T</sup>**
**MS-H-S**
**MS-H280-Pro**
**MS-H-S10**

|  |                             |                             |                                     |                                     |                                     |                                     |                                    |
|--|-----------------------------|-----------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------------------------------------|
| Dimension of work plate [mm]                                   | 184x184 (7 inch)            | 184x184 (7 inch)            | φ135(5 inch)                        | φ135(5 inch)                        | φ135(5 inch)                        | φ135(5 inch)                        | 180×450                            |
| Work plate material  | Glass ceramic               | Glass ceramic               | Stainless steel with ceramic coated | Stainless steel with ceramic coated | Stainless steel with ceramic coated | Stainless steel with ceramic coated | Stainless steel with silicone Film |
| Motor type   | Brushless DC motor          | Shaded pole motor           | Brushless DC motor                  | Brushless DC motor                  | Brushless DC motor                  | DC motor                            | Brushless DC motor                 |
| Motor rating input [W]   | 18                          | 15                          | 18                                  | 18                                  | 18                                  | 5                                   | 12                                 |
| Motor rating output [W]  | 10                          | 1.5                         | 10                                  | 10                                  | 10                                  | 3                                   | 4                                  |
| Power [W]  | 1050                        | 1030                        | 550                                 | 550                                 | 530                                 | 515                                 | 490                                |
| Voltage [VAC]  | 100-120/200-240             | 100-120/200-240             | 100-120/200-240                     | 100-120/200-240                     | 100-120/200-240                     | 100-120/200-240                     | 100-120/200-240                    |
| Frequency [Hz]   | 50/60                       | 50/60                       | 50/60                               | 50/60                               | 50/60                               | 50/60                               | 50/60                              |
| Stirring positions   | 1                           | 1                           | 1                                   | 1                                   | 1                                   | 1                                   | 10                                 |
| Max. stirring quantity[H <sub>2</sub> O], L                    | 20                          | 10                          | 20                                  | 20                                  | 20                                  | 3                                   | 0.4 (each stirring position)       |
| Max. magnetic bar(L x Ø) [mm]                                  | 80                          | 80                          | 80                                  | 80                                  | 80                                  | 50                                  | 40                                 |
| Speed range [rpm]  | 100-1500                    | 0-1500                      | 100-1500                            | 100-1500                            | 0-1500                              | 100-1500                            | 0-1100                             |
| Speed display  | LCD                         | Scale                       | LCD                                 | LCD                                 | Scale                               | LED                                 | Scale                              |
| Speed display resolution [rpm]                                 | ±1                          | -                           | ±1                                  | ±1                                  | -                                   | -                                   | -                                  |
| Heating output [W]   | 1000                        | 1000                        | 500                                 | 500                                 | 500                                 | 500                                 | 470                                |
| Heating temperature range [°C]                                 | Room Temp.-550, increment 1 | Room temp.-550, increment 5 | Room temp.-340, increment 1         | Room temp.-340, increment 1         | Room temp.-340                      | Room temp.-280, increment 1         | Room temp.-120                     |
| Control accuracy of work plate [°C]                            | ±1(<100°C)<br>±1%(>100°C)   | ±10                         | ±1(<100°C)<br>±1%(>100°C)           | ±1(<100°C)<br>±1%(>100°C)           | -                                   | ±1(<100°C)<br>±1%(>100°C)           | -                                  |
| Safety temperature [°C]  | 580                         | 580                         | 360                                 | 360                                 | 350                                 | 320                                 | 140                                |
| Temperature display  | LCD                         | LED                         | LCD                                 | LCD                                 | Scale                               | LED                                 | Scale                              |
| Temperature display accuracy [°C]                              | ±0.1                        | ±1                          | ±0.1                                | ±0.1                                | -                                   | ±1                                  | -                                  |
| External temperature sensor                                    | PT1000                      | PT1000                      | PT1000                              | PT1000                              | N/A                                 | PT1000                              | N/A                                |
| Control accuracy with external temperature sensor PT1000 [±°C] | ±0.2                        | ±0.5                        | ±0.2                                | ±0.2                                | -                                   | ±0.5                                | -                                  |
| Heating warning [°C]   | 50°C                        | 50°C                        | 50°C                                | 50°C                                | N/A                                 | 50°C                                | N/A                                |
| Time setting range   | -                           | -                           | -                                   | 1min to 99h 59min                   | -                                   | -                                   | -                                  |
| Remote control (RS232 interface)                               | Yes                         | N/A                         | Yes                                 | Yes                                 | N/A                                 | N/A                                 | N/A                                |
| Protection class   | IP21                        | IP21                        | IP42                                | IP42                                | IP42                                | IP21                                | IP42                               |
| Dimension [W x D x H] mm                                       | 215x360x112                 | 215x360x112                 | 160x280x85                          | 160x280x85                          | 160x280x85                          | 150x260x80                          | 182x552x65                         |
| Weight [kg]  | 5.3                         | 4.5                         | 2.8                                 | 2.8                                 | 2.8                                 | 1.8                                 | 3.2                                |
| Permissible ambient temperature [°C]                           | 5-40                        | 5-40                        | 5-40                                | 5-40                                | 5-40                                | 5-40                                | 5-40                               |
| Permissible relative humidity                                  | 80%                         | 80%                         | 80%                                 | 80%                                 | 80%                                 | 80%                                 | 80%                                |



**It is available of stirrer bars**

Stirrer bars and stirrer bar remover(PTFE), use below 150°C

**Models**

MS-H550-Pro  
 MS-H550-S  
 MS-H-Pro<sup>+</sup>  
 MS-H-Pro<sup>T</sup>  
 MS-H-S  
 MS-S

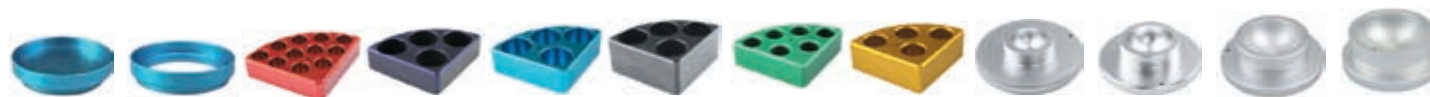
MS-H280-Pro  
 MS-PA  
 MS-PB

MS-H-S10  
 MS-M-S10

| Cat. No. | Size of stirrer bars [mm]            | Suitable for Max. stirrer bar 80mm | Suitable for Max. stirrer bar 50mm | Suitable for Max. stirrer bar 40mm |
|----------|--------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| 18900006 | 10mm x 6mm                           | •                                  | •                                  | •                                  |
| 18900007 | 15mm x 8mm                           | •                                  | •                                  | •                                  |
| 18900008 | 20mm x 8mm                           | •                                  | •                                  | •                                  |
| 18900009 | 25mm x 8mm                           | •                                  | •                                  | •                                  |
| 12500005 | 30mm x 6mm                           | •                                  | •                                  | •                                  |
| 18900011 | 40mm x 8mm                           | •                                  | •                                  | •                                  |
| 12500004 | 51mm x 8mm                           | •                                  | •                                  |                                    |
| 18900013 | 65mm x 8mm                           | •                                  |                                    |                                    |
| 18900014 | 80mm x 13mm                          | •                                  |                                    |                                    |
| 18900015 | Stirrer bar remover, length of 200mm | •                                  | •                                  | •                                  |



**MS-H-Pro<sup>+</sup>**  
with PT1000  
and 1/4 color  
pies



| Cat. No.     | 18900001   | 18900065                                     | 18900002   | 18900003  | 18900004   | 18900005  | 18900048   | 18900049   | 18101006  | 18101007   | 18101008   | 18101009   |
|--------------|--|--|--|---|--|---|--|--|---|--|--|--|
| Descriptions | Blue carrying plate, use with color quarter pies | Blue Fixed ring, use with color quarter pies | Red quarter pie, 11 holes, 4 mL reaction vessel, Ø15.2mm, 20mm depth | Purple quarter pie, 4 holes, 20 mL reaction vessel, Ø28mm, 24mm depth | Blue quarter pie, 4 holes, 30mL reaction vessel, Ø28mm, 30mm depth | Black quarter pie, 4 holes, 40mL reaction vessel, Ø28mm, 43mm depth | Green quarter pie, 6 holes, 8mL reaction vessel, Ø17.8mm, 26mm depth | Golden quarter pie, 4 holes, 16mL reaction vessel, Ø21.6mm, 31.7mm depth | Reaction block for 50mL round bottom flask (one flask capacity) | Reaction block for 100mL round bottom flask (one flask capacity) | Reaction block for 250mL round bottom flask (one flask capacity) | Reaction block for 500mL round bottom flask (one flask capacity) |

Magnetic hotplate stirrers are available to hold quarter color pies (volume range from 4mL to 16mL) and reaction blocks (volume range from 50mL to 500mL), which ensure uniform heating distribution and excellent resistance to chemicals. The color pies and blocks with aluminum material which are easy to clean and safety for lab.

#### Models

|                       |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| MS7-H550-Pro          |   |   | • | • | • | • | • | • |   |   |   |   |
| MS7-H550-S            |   |   | • | • | • | • | • | • |   |   |   |   |
| MS-H-Pro <sup>+</sup> | • | • | • | • | • | • | • | • | • | • | • | • |
| MS-H-Pro <sup>T</sup> | • | • | • | • | • | • | • | • | • | • | • | • |
| MS-H-S                | • | • | • | • | • | • | • | • | • | • | • | • |
| MS-H280-Pro           | • | • | • | • | • | • | • | • | • | • | • | • |



**MS-H-Pro<sup>+</sup>**  
with PT1000  
and reaction  
block



| Cat. No.     | 18900019  | 18900016  | 18900136  | 18900017                | 18900148                                      |
|--------------|---|---|---|-------------------------|---|
| Descriptions | F101 protective cover, for hotplate models, temperature resistance of 135°C | PT1000-A, temperature sensor for digital hotplate models, length of 230mm | PT1000-B, temperature sensor with glass coated, length of 230mm, used for digital hotplate models | Support clamp of PT1000 | Support clamp of PT1000, use with MS-H280-Pro |

#### Models

|                       |   |   |   |   |   |
|-----------------------|---|---|---|---|---|
| MS7-H550-Pro          |   | • | • | • |   |
| MS7-H550-S            |   | • | • | • |   |
| MS-H-Pro <sup>+</sup> | • | • | • | • |   |
| MS-H-Pro <sup>T</sup> | • | • | • | • |   |
| MS-H-S                | • |   |   | • |   |
| MS-H280-Pro           |   | • | • |   | • |