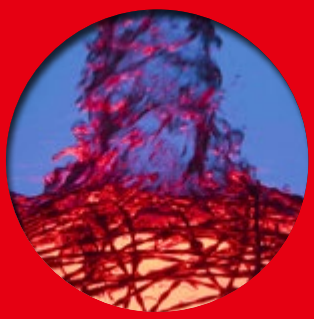


3 Hot Plates / Stirrers
Dry Bath / Heating Mantles

WIGGENS
THE MAGIC MOTION

WIGGENS
THE MAGIC MOTION

Laboratory Hotplate Stirrers

Attractive design for demanding heating & mixing

More Powerful Units

Our new complete range of laboratory hotplate stirrers will meet your high demands every day!

WH380

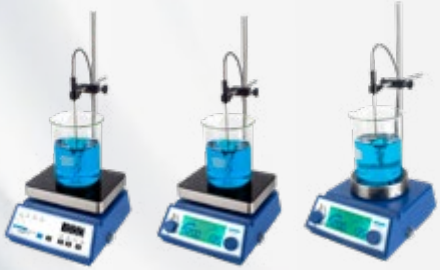
Intelligent heating technology for your very demanding applications

IR Heating

WH260-H WH260-R

More precise, more ingenious heating, stirring, controlling with a modern design

IR Heating



WH220-HT WH240-HT WH240-R

Powerful infrared heating

IR Heating

WH420 WH620

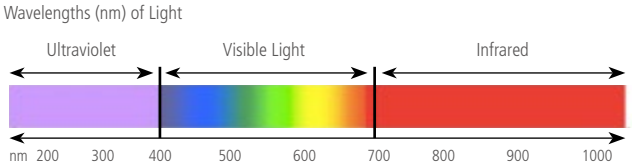
Multi-position heating & mixing

WH200 WH210 WH220

New entry level for lab heating & mixing

Infrared Radiation Heating

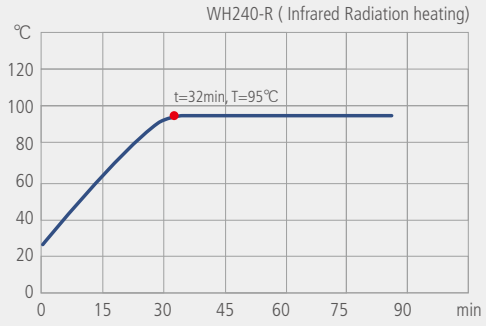
Infrared radiation heating refers to the spectrum between 0.7um-100um of light waves, emission and transmission accompanied by obvious, directional energy transmission. The energy transmission does not need any media, even in vacuum space. The infrared heating is using an electromagnetic wave with a wavelength of 2.5 to 15 um. This speed is much higher than the rate of conduction and convection.

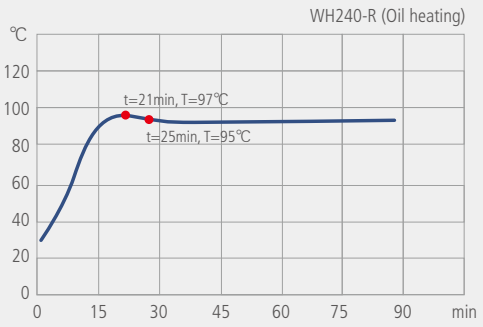


IR Heating

Magnetic heating stirrer is usually suitable for the heating of beakers, flasks, crystallizing dishes and other containers and the mixing of samples. In chemical synthesis laboratories, however, it is often necessary to heat and mix round bottom flasks, they are usually heated only in oil. It is necessary to wipe out splashed bath oil. Rather than oil heating, infrared radiation heating can heat the sample directly, cleanly.

Infrared radiation heating can be more effective use of heating power. The heating magnetic stirrer using infrared radiation heating has a better temperature stability control. When you turn off the heater, they also stop radiating heat the instant. In comparison, an oil-filled heater will continue to warm even after the unit is off because it takes time for the heated oil to cool down. In addition, the infrared heating does not use any kind of oil and any other media, so compared to oil bath heaters, and it's more environmentally friendly and safe.





Glass bath :
Used for sample splashing or other accidents occurring protection

Digital Hot Plate / Stirrers New entry level for lab heating & mixing

WH200 / WH210 / WH220

> Our laboratory hotplates / stirrers are developed and produced according to high international quality standards.
> Advanced microprocessor controlling system guarantees the reliability and temperature stability.
> Bright and clear LED digital display and setting for the working temperature and stirring speed.
> Memory function for stirring speed and setting temperature, convenient for experiments with fixed conditions.
> Liquid drainage above the control board to prevent liquids from accessing the system.
> Direct connection for thermocouple sensor for convenient solution temperature control.
> Sealed outer shell and isolated critical parts design for enhanced longevity even in a harsh laboratory environment.
> When the temperature of the top plate is above 60℃ , hot-top indicator will light up for the user's safety protection.

Standard thermocouple sensor
Accurate solution temperature with in ±2℃ in general range.

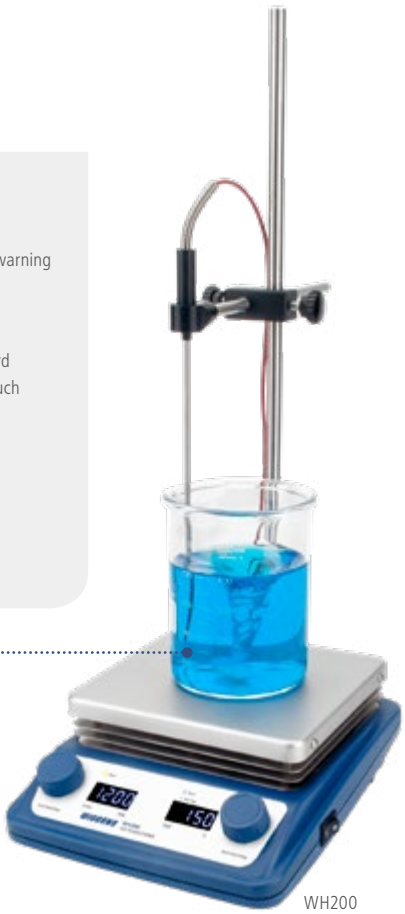
Safety protection
Flashing high temperature indicator, warning for hurt by touch

LED Display

Simultaneously displaying various parameters, memory of the last working parameters

Liquid drainage above the control board
Avoid the solution splashing on the touch board.

WH200 with aluminum plate, WH210 with SS304 plate.
Effective heat transfer



WH200

For stirrer bars, please reference Page 73

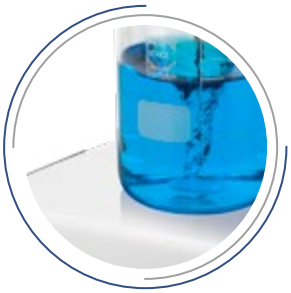
Standard thermocouple sensor
Accurate solution temperature within ±2 ℃ in general range.

Specifications

Model	WH200	WH210	WH220
Display Mode / Control type	LED Digital Display / Knob Control	LED Digital Display / Knob Control	LCD Digital Display /Knob Control
Max. Set Temperature (top plate) (℃)	250	250	380
Sensor	Thermocouple sensor	Thermocouple sensor	PT100
Max. Set Temperature (With sensor)(℃)	250	250	200
Temperature Stability (With sensor)(℃)	±2	±2	±2
Safety Temp. (℃)	280	280	50~430
Stirring Speed Range (rpm)	100~1500	100~1500	100~1200
Heating Capacity (W)	300	500	500
Max. Capacity (L)H_2O	2	2	20
Top Plate Material	Aluminum	SS304 coated with ceramic	SS304 coated with ceramic
Top Plate Dimensions (mm)	165x150	180x145	145x180
PID Parameters	1 set of PID	1 set of PID	2 set of PID
Order No.	400302	400402	400400

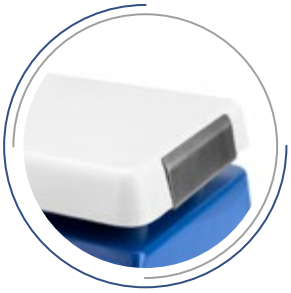
WIGGENS
THE MAGIC MOTION

LCD Digital Display /
Knob Control



Powerful magnets and motor give stirring speeds up to 1200rpm and volumes up to 20 litres.

WH220



With white coated heating plate!

- Offers excellent chemical resistance
- The white surface helps to recognize color changes of fluids in a glass vessel.
- Easy to clean

Cleaning. Easy.
Boast a beautiful and functional design that makes cleaning a breeze.

Everything at the front.
Access all functions and connections conveniently from the front of the unit.

Brilliant.
The clear, bright display makes it easy to read even from a distance.

WH210

Digital Hot Plate / Stirrers Multi-position heating & mixing

WH420 / WH620

> Advanced microprocessor controlling system guarantees the reliability and temperature stability
> Bright and clear LED digital display and setting for the working temperature, stirring speed, working time, and safety temperature
> Memory function for stirring speed and setting temperature, convenient for experiments with fixed conditions
> Liquid drainage above the control board to prevent liquids from accessing the system
> Direct connection for Pt100 temperature sensor for convenient solution temperature control
> Sealed outer shell and isolated critical parts design for enhanced longevity even in a harsh laboratory environment
> When the temperature of the top plate is above 60℃ , hot-top indicator will light up for the user's safety protection

Standard PT100 temperature sensor
Accurate solution temperature with in ±2℃ in general range.

LED selectable
Simultaneously displaying various parameters, memory of the last working parameters.

Ceramic top plate
Great anti-corrosive ability to acid, base, or organic solvents.

Safety protection
Flashing high temperature indicator, warning for hurt by touch.

Liquid drainage above the control board
Avoid the solution splashing on the touch board.

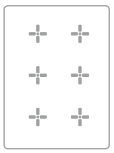
Advantages and Applications

> Anti-corrosion top late is easy to clean, can stand high temperatures.
> Ceramic coated stainless steel top plate is suitable for relatively mild heating, good for small sample amounts relatively low temperature for large volume sample
> WH420 with four positons and WH620 with six positions, each of them can be controlled separetely
> Both of WH420 and WH620 have a timer function for heating.

WH420 / WH620 Heating and stirring in parallel

> The multiple talents of WH420/WH620 are particularly suited for laboratories in which highly differing tasks are to be coped with.


4


6

Specifications

Model	WH420	WH620
Display Mode	LED	LED
Max. Set Temperature (top plate) (℃)	300	300
Max. Set Temperature (with Pt100 sensor)(℃)	300	300
Temperature Stability (with Pt100 sensor)(℃)	±2	±2
Safety Temp. (℃)	370	370
Stirring Speed Range (rpm)	150~1500	150~1500
Heating Capacity (W)	1000	1500
Max. Capacity (L)H_2O	2	2
Top Plate Material	Aluminum coated with ceramic	Aluminum coated with ceramic
Timer (min)	1 - 9959 / continuous	1 - 9959 / continuous
Number of stirring positions	4	6
PID Parameters	1 set of PID	1 set of PID
Interface	RS232	RS232
High Temperature Protection △ T(℃)	--	--
Top Plate Dimensions (mm)	(160×155mm) x4	(150×133mm) x6
Dimensions (mm)	405x320x80	525x320x87
Order No.	400315	400316


WH420


WH620

WIGGENS
THE MAGIC MOTION

Infrared Hot Plates / Stirrers Powerful infrared heating

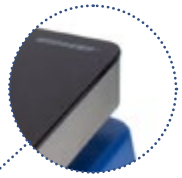
WH220-HT / WH240-HT

- Advanced microprocessor controlling system guarantees the reliability and temperature stability
- Bright and clear LCD or LED digital display and setting for the working temperature, stirring speed, working time, and safety temperature
- Memory function for stirring speed and setting temperature, convenient for experiments with fixed conditions
- Liquid drainage above the control board to prevent liquids from accessing the system
- Direct connection for Pt100 temperature sensor for convenient solution temperature control
- Sealed outer shell and isolated critical parts design for enhanced longevity even in a harsh laboratory environment
- When the temperature of the top plate is above 60℃ , hot-top indicator will light up for the user's safety protection

Safe Heating and Mixing

Have you ever heard of hotplates with fast heat-up times and chemical resistance?

WH220-HT



Ceramic glass top
Excellent anti-corrosion ability
Excellent scratch resistance
Excellent IR transparency
Excellent anti-thermal-shock characteristics
Easy to clean

WH240-HT

LCD Digital Display / Knob Control

Standard PT100 temperature sensor
Accurate solution temperature within ±2℃ in general range.

LCD / LED selectable
Simultaneously displaying various parameters, memory of the last working parameters.

Ceramic or ceramic glass top plate
Great anti-corrosive ability to acid, base, or organic solvents.

Safety protection
Flashing high temperature indicator, warning for hurt by touch.

Liquid drainage above the control board
Avoid the solution splashing on the touch board.

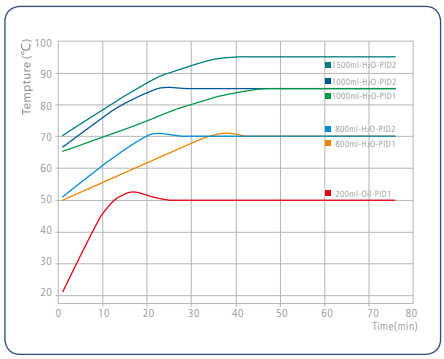
HT serial - Advantages and Applications

> Chemical resistant ceramic glass plate with excellent anti-thermal-shock characteristics, robust and easy to clean with an attractive appearance as well as practical reliability
> Very quick obtainment of desired high media temperature, which low temperature models can not reach
> High safety protection: When exceeding the safety range of the hotplate (50℃ more than the setting temperature) or solution (adjustable for WH240-HT), the heating can be shut off immediately and automatically for the safety protection
> Two sets of PID parameters (WH240-HT) suitable for quick heating of large volume sample or accurate control of small amount sample

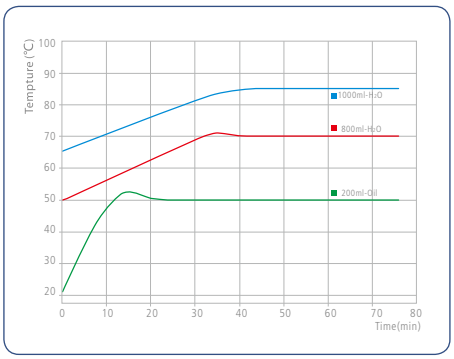
The heating capacity of WH220-HT and WH240-HT

WH220-HT and WH240-HT have two sets of PID parameters selectable from the menu, PID1 suitable for accurate control of small amount sample （small volume or specific heat）, and PID2 is suitable for quick heating and stable temperature of large volume sample.

WH240-HT Heating curve



WH220-HT Heating curve



Note: Above data is based on the 220V/50Hz instrument with pure water (H_2O) and simethicone (Silicon Oil).

For stirrer bars, please reference Page 73

Specifications

Model	WH220-HT	WH240-HT
Display Mode	LED	LCD
Max. Set Temperature (top plate) (℃)	400	450
Max. Set Temperature (with Pt100 sensor)(℃)	300	300
Temperature Stability (with Pt100 sensor)(℃)	±2	±2
Safety Temp. (℃)	450	50~500 adjustable
Stirring Speed Range (rpm)	100~1200	100~1200
Heating Capacity (W)	800	800
Max. Capacity (L)H2O	20	20
Top Plate Material	Ceramic glass	Ceramic glass
Timer (min)	-	1 - 1999 / continuous
PID Parameters	1 set of PID	2 set of PID
Interface	USB	USB
Top Plate Dimensions (mm)	150x190	150x190
Dimensions (mm)	225X215X115	225X215X115
High Temperature Protection △ T(℃)	-	10~50 adjustable
Order No.	400301	400401

WIGGENS
THE MAGIC MOTION

Infrared Hot Plates / Stirrers Parallel infrared heating and mixing

WH240-R

> Advanced microprocessor controlling system guarantees the reliability and temperature stability
> Bright and clear LCD digital display and setting for the working temperature, stirring speed, working time, and safety temperature
> Memory function for stirring speed and setting temperature, convenient for experiments with fixed conditions
> Liquid drainage above the control board to prevent liquids from accessing the touching board and the electronics
> Direct connection for Pt100 temperature sensor for convenient solution temperature control
> Sealed outer shell and isolated critical parts design for enhanced longevity even in a harsh laboratory environment
> New enhanced infrared heating element, is a type of high temperature hot plate stirrer with very high heating density, can reach a high media temperature
> High safety protection: When exceeding the safety range of the hotplate (50℃ more than the setting temperature) or solution (adjustable for WH240-R), the heating can be shut off immediately and automatically for the safety protection

-High power infrared heating
-Fast heating up
-Volume up to 2000 mL

Standard PT100 temperature sensor
Accurate solution temperature with in ±2℃ in general range.

LCD / LED selectable
Simultaneously displaying various parameters, memory of the last working parameters.

Ceramic glass top plate
Great anti-corrosive ability to acid, base, or organic solvents.

Safety protection
Flashing high temperature indicator, warning for hurt by touch.

Liquid drainage above the control board
Avoid the solution splashing on the touch board.

Glass oil bath
Stainless steel oil bath

LCD Digital Display / Knob Control

Specifications

Model	WH240-R
Display Mode	LCD
Control	Digital set and control
Max. Set Temperature (top plate) (℃)	450 (Continuous)
Max. Set Temperature (with Pt100 sensor)(℃)	300
Temperature Stability (with Pt100 sensor)(℃)	±2
Safety Temp. (℃)	50~500 adjustable
Stirring Speed Range (rpm)	100~1200
Heating Capacity (W)	800
Max. Capacity (L) H2O	20
Top Plate Material	Ceramic Glass
Top Plate Dimensions (mm)	Ø135
Dimensions (mm)	225x215xx115
High Temperature Protection(△ T)	50℃ (Factory set value 50℃ ,10-50℃ adjustable)
Timer (min)	1 - 1999 / continuous
PID Parameters	2 set of PID
Communication	USB (COM)
Interface	USB
Order No.	400501

Infrared Hot Plates / Stirrers Attractive design for demanding heating & mixing

WH260-H / WH260-R

> Advanced microprocessor controlling system guarantees the reliability and temperature stability.
> Bright and clear LCD digital display and setting for the working temperature, stirring speed, working time, and safety temperature.
> Memory function for stirring speed and setting temperature, convenient for experiments with fixed conditions.
> Liquid drainage above the control board to prevent liquids from accessing the touching board and the electronics.
> Direct connection for Pt100 temperature sensor for convenient solution temperature control.
> Sealed outer shell and isolated critical parts design for enhanced longevity even in a harsh laboratory environment.
> New enhanced infrared heating element, is a type of high temperature hot plate stirrer with very high heating density, can reach a high media temperature.
> High safety protection: When exceeding the safety range of the hotplate (10-50 ℃ adjustable) , the heating can be shut off immediately and automatically for the safety protection.
> 3 sets of PID parameters, suitable for accurate control of small amount sample （ small volume or specific heat ） , and quick heating and stable temperature of large volume sample.

Strong. Robust.

WH260-R

WH260-H

WIGGENS
THE MAGIC MOTION

Our new laboratory hot plate stirrers will fulfill all the high demands you place on it every day!

The laboratory stirrer WH260 is extremely well suited for gentle to intensive mixing of liquids and at the same time it can quickly heat the liquids or simply keep them at a steady temperature.

LCD display
Simultaneously displaying various parameters, memory of the last working parameters.

ceramic glass top plate
Great anti-corrosive ability to acid, base, or organic solvents.

Safety protection
Flashing high temperature indicator, warning for hurt by touch.

3 sets of PID
Suitable for different application, for accurate control of small amount samples to quick heating and stable temperature of large volume sample..

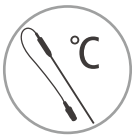
Heating power
WH260-H with 1000w power, rapid heating speed.

Safety Temperature
is an adjustable temperature safety circuit that prevents from exceeding a specified set temperature. The safety temperature can be adjusted by using a special tool included in the product delivery

Overheating protection
Should the internal temperature of the exceed the permissible temperature that would damage the internal electronic components, the heating power is reduced automatically.

Set temperature
can be adjusted easily. It is used to safely heat the medium until the set temperature is reached

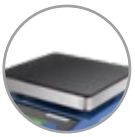
USB interface
Enable connecting the unit to a PC for operating



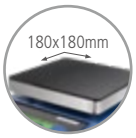
Standard PT100 temperature sensor
Accurate solution temperature with in ±2℃ in general range.

Liquid drainage above the control board
Avoid the solution splashing on the touch board.

The large LCD display is used to show and control all functions.



Ceramic Glass by Schott combines chemical resistance, top quality surfaces and resistance to temperature shocks of greater than 700℃ .



WH260-H
Plate dimension: 180x180mm

WH260-R
Plate dimension: Ø135cm
Suitable for Parallel application

Height: Only 80mm

The casing is resistant to corrosion, stable and hermetically sealed from above and so guarantees long and problem free use.

Easy to operate thanks to rotating knobs control panel.

But perhaps you do need a specialist?

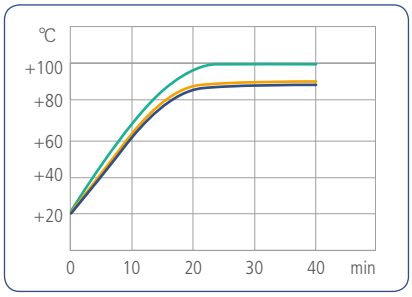
For example a laboratory hotplate with temperature control or simply a hotplate or a laboratory hotplate with stirring function in parallel. We have it all for you.

The laboratory hotplate WH260 series can be used to mix liquids gently to intensively and if required they can also be heated quickly or at controlled temperatures.

The heating capacity of WH260-H and WH260-R

WH260-H and WH260-R have three sets of PID parameters selectable from the menu, PID1 suitable for accurate control of small amount sample （small volume or specific heat）, and PID3 is suitable for quick heating and stable temperature of large volume sample.

WH260-H Heating curve



- 150ml, Silicon oil-PID1
- 300ml, H_2O-PID2
- 500ml, H_2O-PID3

Note: Above data is based on the 220V/50Hz instrument with pure water (H_2O) and simethicone (Silicon Oil).

Specifications

Model	WH260-H	WH260-R
Display Mode / Control type	LCD Digital Display /Knob Control	LCD Digital Display /Knob Control
Max. Set Temperature (top plate) (℃)	450	450
Max. Set Temperature (with Pt100 sensor)(℃)	300	300
Temperature Stability (with Pt100 sensor)(℃)	±2	±2
Safety Temp. (℃)	50-500 adjustable	50-500 adjustable
Stirring Speed Range (rpm)	100~1500	100~1500
Heating Capacity (W)	900	800
Motor	DC brushless motor, 12W	DC brushless motor, 12W
Max. Capacity (L)H2O	20	20
Top Plate Dimensions(mm)	180x180	Ø135
High Temperature Protection(△ T)	10-50℃ adjustable	10-50℃ adjustable
Timer (min)	1 - 1999 / continuous	1 - 1999 / continuous
Top Plate Material	Ceramic glass	Ceramic glass
PID Parameters	3 sets	3 sets
Communication	USB(COM)	USB(COM)
Interface	USB	USB
Order No.	400601	400602

For stirrer bars, please reference Page 73

WIGGENS
THE MAGIC MOTION

Soft Dry Bath -one for all shapes of vessels

Heating in reflux, distillation and rectification, Oil free heating, completely new experience

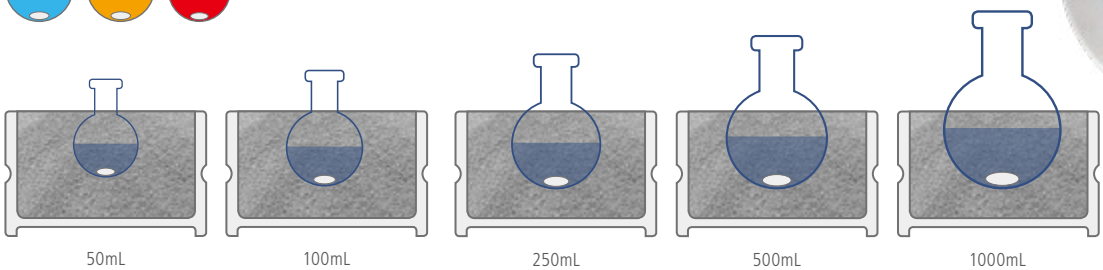
WIGGENS launched one for all shapes of vessels Soft Dry Bath which can be easily mounted on the top of 135mm round hotplate top.

> The high quality soft dry bath developed and produced by Wiggens have uniform heat transfer and fast heat conduction, which is very suitable for replacing the small oil bath commonly used in the laboratory dry bath module,electric heating sleeve and other heating methods.
> Aluminum bottom of the bath, it helps to transfer the heat to alloy particles very fast. Surrounded by PTFE material, for insulation and anticorrosion
> With infrared heating (IR) technology and ACC self-tuning temperature control technology of Wiggens, it can achieve faster heating effect and better temperature stability.

Suitable for any shape of container
Replacement of Silicon oil
Replacement of thermostat module
High temperature
Safety
New experience
No cleaning required.
Energy conservation and environmental protection
The exclusive technology

One For All

Suitable for any shape of container



Suitable for different volume of containers

Order information

Order No.	Model	Description
SDB-1	Dry bath tank and jacket	The dry bath tank and PTFE insulation jacket internal diameter: 140mm
SDB-2	Alloy seeds	The alloy seeds, 2kg

* For digital hot plate / stirrers (WH240-R or WH260-R), you need to order separately.

For stirrer bars, please reference Page 73

Parallel Reaction Station

6 and 12 positions are optional

The 6 Parallel Reaction Station simultaneously heats, stirs and refluxes multiple samples under an inert atmosphere. Accepts round bottom flasks: 50 ml, 100 ml and 250 ml sizes.

Features

- Powerful, even stirring - fits onto a Stirring Hotplate.
- Rapid heating to 180 °C.
- Quick to set up and easy to use.
- Water-cooled reflux head.
- Perform reactions under an inert atmosphere.
- Easy viewing of flask contents during experiments.
- 100 ml and 250 ml azeotropic (Dean and Stark) flask option.
- PTFE caps feature a quick-thread for fast attachment to flasks.

Heated directly by the stirring hotplate with optional digital control and Pt1000 temperature sensor

Chemical-resistant Easy-On PTFE caps feature a quick-thread for fast attachment to the glass tubes and push-on connections to the stainless steel gas outlets

Aluminium inserts allow easy removal of flasks and good temperature transfer for refluxing

Round aluminium base transmits heating evenly to all positions. Compact size has small bench-top footprint. Easy to store

Central inlet/outlet for vacuum and gas, combined with a radial gas distribution system and gas-tight PTFE caps, allow reactions under an inert atmosphere

Round design makes all reaction flasks visible, with no need to lean into the fume hood

Water-cooled aluminium reflux head provides efficient refluxing within individual glass reaction flasks. Quick-release couplings prevent water loss during set-up/ breakdown

Range of glass vessels:50 ml, 100 ml and 250 ml round bottom flasks, as well as vessels with one or two sidearms

Utilises the single rotating magnetic field of the hotplate stirrer to stir all the positions evenly and powerfully

Rare earth elliptical PTFE stirring bar provides powerful stirring and a deep vortex

Carousel Stirring Hotplate offers higher temperature, powerful stirring and digital control

Aluminium inserts for 50 ml and 100 ml flasks

50 ml Reaction Flask Reflux Tube & PTFE Cap

50 ml Flask with Sidearm Reflux Tube & PTFE Cap

100 ml Reaction Flask Reflux Tube & PTFE Cap

A wide range of accessories including liquid additions funnels, powder funnels and rotary evaporator adapters

For more information about parallel reaction station, please contact WIGGENS (info@wiggens.com)

Infrared Hot Plates / Stirrers Intelligent heating technology for your very demanding applications

WH380

The first address for laboratory instruments

In addition to fast or temperature controlled heating, a lot of applications also require liquids to be stirred. Using our laboratory stirrer WH380 with heating, the process of mixing liquids can be selected from careful to intense, and the device can also be used for speedy heating up or controlled temperature adaptation.

Safe Heating and Mixing

Have you ever heard of hotplates with fast heat-up times and chemical resistance?

Chemical resistance, a high surface quality, and a resistance to temperature shocks of more than 700°C provide the user with maximum benefits compared to conventional heating surface materials. The always pore-free and plane surface enables even most stubborn dirt to be removed simply and in a caring manner. The high infra-red permeability ensures that the heating energy is transferred quickly and with a low loss rate, i.e. it heats liquids faster than other heating surface materials, and thus saves energy.

Quality and safety

- As a matter of course, our laboratory hotplates and laboratory stirrers are developed and produced according to high international quality standards.
- A residual-heat display protects the user from the hazard of injuries (burning). Over-heating is excluded by the built-in over-temperature protection.
- The corrosion-resistant, solid, casing with a hermetically sealed, non-inflammable top made of duroplastic in the case of the laboratory hotplates and of coated die-cast aluminium in the case of the laboratory stirrer ensure a long and trouble-free use of the devices.
- The stand rod holder on the back panel of the device can be used to connect accessories such as a temperature sensor conveniently and securely.

Our new laboratory stirrer will fulfill all the high demands you place on it every day!

The laboratory stirrer WH380 is extremely well suited for gentle to intensive mixing of liquids and at the same time it can quickly heat the liquids or simply keep them at a steady temperature.

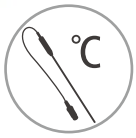
Touch controller with intuitive control

The newly designed touch controller has modern sensor keys with a separate display field. Thus you can always keep track and the display field keeps clean. The newly developed menu structure has been optimized by usability experts and offers simple and intuitive operation.

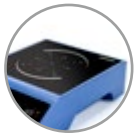
User friendly design

Since the device is controlled using infrared touchcontrol technology, the design of the hotplates excels by the absence of exposed controls, space-restricting frames, or dirt-attracting corners. These design features contribute to a considerable minimisation of the efforts required for cleaning and servicing the devices on a daily basis.

Using our new WH380 stirrer with heating, the process of mixing liquids can be selected from careful to intense, and the device can also be used for speedy heating up or controlled temperature adaptation.



Standard PT100 temperature sensor
Accurate solution temperature within ±2℃ in general range.



Ceramic Glass by Schott combines chemical resistance, top quality surfaces and resistance to temperature shocks of greater than 700℃ .

ceramic glass top plate
Great anti-corrosive ability to acid, base, or organic solvents.

Heating power
WH380 with 1200w power, rapid heating speed.

Safety protection
Flashing high temperature indicator, warning for hurt by touch.

The casing is resistant to corrosion, stable and hermetically sealed from above and so guarantees long and problem free use.

Touch controller
with comfortable and easy operation

Heating zone: Ø190

WIGGENS
THE MAGIC MOTION

Stirring, heating and controlling using the WH380

> Corrosion-resistant Ceramic Glass top plate
> Excellent transmittance of the infrared light
> The top plate can resist up to 700℃ thermal shocks
> Hermetically sealed, corrosion-resistant, solid casing
> Fast heating and excellent temperature stability
> External control by the connection of a Pt100 temperature sensor
> A high-temperature indicator warns the user and prevents burning injuries
> Compressed air connector optionally available for the use in aggressive environments

The laboratory hotplate WH380 can be used to mix liquids gently to intensively and if required they can also be heated quickly or at controlled temperatures.

For stirrer bars, please reference Page 73

Specifications

CE

Model	WH380
Display Mode	LED
Heating Capacity (kW)	1.2
Max. Set Temperature (top plate) (℃)	550
Max. Set Temperature (with Pt100 sensor)(℃)	40-300
Temperature Stability (with Pt100 sensor)(℃)	±2
Min. Time to Boiling Point for 1L H_2O (min)	10(1L H_2O)
Stirring Speed Range (rpm)	50~1500
Setting accuracy (rpm)	10
Digital set/actual rpm display	yes
Top Plate Area (W x L in mm)	280*280
Heating Zone (mm)	Ø190
Mixing Capacity (L) H_2O	30
Top Plate Material	Ceramic Glass
Housing material	Die-cast, coated with anti-corrosion material
Environmental conditions	-5℃ ~+40℃; Admissible air humidity 85%
Protection type / protection class	IP20, Level 1
Temperature sensor connector	Pt100
Interface	RS-232
Dimensions (L x W x H in mm)	450X282X115
max. load (kg)	25
Weight (kg)	4.1
Mains connection	230V/50Hz
Order No.	400801

Infrared Hot Plates / Stirrers Intelligent heating technology for your very demanding applications

SLR

Stirring, heating and controlling using the SLR

In addition to fast or temperature controlled heating, a lot of applications also require liquids to be stirred. Using our laboratory stirrer SLR with heating, the process of mixing liquids can be selected from careful to intense, and the device can also be used for speedy heating up or controlled temperature adaptation.

Features

- Corrosion-resistant ceramic glass top plate
- Excellent transmittance of the infrared light
- The top plate can resist up to 700℃ thermal shocks
- Hermetically sealed, corrosion-resistant, solid casing
- Fast heating and excellent temperature stability
- External control by the connection of a Pt100 temperature sensor
- Large LCD display for setting and monitoring of temperature and speed
- A high-temperature indicator warns the user and prevents burning injuries
- Compressed air connector optionally available for the use in aggressive environments

1.8kW

Specifications

CE

Model	SLR
Display Mode	LCD
Heating Capacity (kW)	1.8
Max. Set Temperature (top plate) (℃)	550
Max. Set Temperature (with Pt100 sensor)(℃)	40-300
Temperature Stability (with Pt100 sensor)(℃)	±2
Min. Time to Boiling Point for 1L H_2O (min)	7 (1L H_2O)
Stirring Speed Range (rpm)	50~1500
Setting accuracy (rpm)	10
Digital set/actual rpm display	yes
Top Plate Area (W x L in mm)	280*280
Heating Zone (mm)	Ø190
Mixing Capacity (L) H_2O	30
Top Plate Material	Ceramic Glass
Housing material	Die-cast, coated with anti-corrosion material
Environmental conditions	-5℃ ~+40℃; Admissible air humidity 85%
Protection type / protection class	IP20, Level 1
Temperature sensor connector	Pt100
Interface	RS-232
Dimensions (L x W x H in mm)	450X282X115
max. load (kg)	25
Weight (kg)	4.1
Mains connection	230V/50Hz
Order No.	285416373

Thermometer

The Handheld High-Precision Digital Thermometer which features high precision, high stability, low power consumption, multiple input types, multiple measurement results, easy operation, etc., can be widely used for handheld precise temperature measurement in production, scientific research and labs.

PR5500 Thermometer

> They have wide Input types, such as Pt100, K, S, E, T, J, R, B and N. There are three compensation modes for thermocouples, including internal compensation, external compensation and manual (simulated) compensation.
> In addition to basic measurement values, the relative value, maximum value, minimum value, average value, peak-peak value, standard deviation and sampling number can also be measured at the same time.
> The thermometer adopts 6-digital display and the resolution can be switched to 0.1℃ or 1℃ .
> For thermal resistances and thermocouples, the display units are switchable among ℃ , °F and K.

PR5600 Thermometer

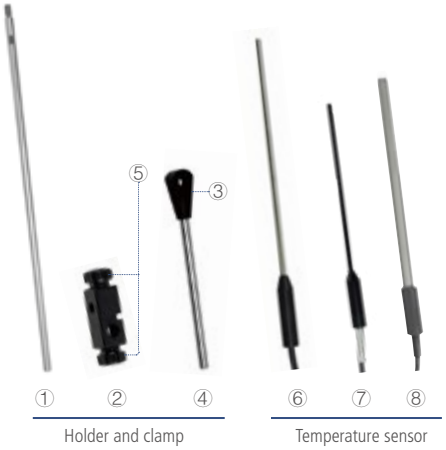
> They have wide Input types such as Pt100, Pt1000, Cu50, Cu100, K, S, E, T, J, R, B, N, as well as Ω, mV, and mA signals.
> There are three compensation modes for thermocouples, including internal compensation, external compensation and manual(simulated) compensation.
> In addition to basic measurement values, the relative value, maximum value, minimum value, average value, peak-peak value, standard deviation and sampling number can also be measured at the same time.
> The thermometer adopts 6-digital display and the resolution can be set. The highest resolution is 0.001℃ (RTD :Resistance Temperature Detector) or 0.01℃ (K/E/J/T/N thermocouple).
> For thermal resistances and thermocouples, the four display units are switchable among Ω or mV, ℃ , °F and K.

Order No.	Working temperature range	Sensor type
PR5500	-50.0~+400.0℃	Pt 100
	-50.0~+500.0℃	K
PR5600	-50.0~+400.0℃	Pt 100
	-50.0~+500.0℃	K

Accessories for Hot Plate / Stirrers

Temperature sensor

Order No.	Model	Description
PT100-01	PT100	Type I; -30~300℃ ;Length: 170 mm; Diameter: 4 mm; Material: Stainless steel;
PT100-02	PT100	Type II; -30~300℃ ; Length: 300 mm; Material: Stainless steel, Fig ⑥
PT100-03	PT100	Type III; -30~250℃ ; Length: 170 mm; Material: Stainless steel, PTFE coated, Fig ⑦
PT100-04	PT100	Type IV; -30~250℃ ;Length: 300 mm; Material: Stainless steel, PTFE coated
PT100-06	PT100	Type VI; -30~300℃ ; Length: 250 mm; Diameter: 4 mm; Material: Glass; Fig ⑧
600.170.1	K type thermocouple	0-500℃ ; Length: 170 mm; Diameter: 4 mm; Material: Stainless steel;



Holder for temperature sensor

Order No.	Model	Description
PT100-05	Holder and clamp for PT100 temperature sensor	Fixed temperature sensor
	PT100-05: ①②③④⑤	
WH220017	① Installation stand	M8x10x400mm
WH220026	② Boss head clamp	Aluminum
WH220027	③ Sensor holder	POM
WH220095	④ Holding rod	M8x8x200mm
WH220096	⑤ Clamp screws	M6x22x15mm

Protective cover

Order No.	Description	Suitable for
400-001	Silicone material, top square opening	WH220-HT, WH240-HT
400-002	Silicone material, top round open	WH240-R

Heating jacket

The heating jacket use for matching with WIGGENS magnetic stirrer with heating or heating plate. The heating jacket improves heat transfer into the medium. It can cut down the heating time considerable.

Order No.	Model	Description
HG1001	HG600	Heating jacket for for 600 ml beaker, Dimensions: Ø 111 x 50 mm, Inner diameter: 91 mm
HG1002	HG1000	Heating jacket for for 1000 ml beaker, Dimensions: Ø 126 x 50 mm , Inner diameter: 106 mm

Clamps for oil bath

fast and easy to fix the big volume flask. It`s adjustable according to the size of the container

Order No.	Maximum length of extension (mm)	maximum container diameter
WA00-56	160	160mm
WA00-56A	160	280mm

Glass oil bath

Order No.	Model	Description
	with spout	
213115407	G1000	Oil bath, Glass, 900mL, inner Ø 140 mm,75 mm height (SCHOTT)
213115904	G2000	Oil bath, Glass, 2L, inner Ø 190 mm,90 mm height (SCHOTT)
213116309	G3500	Oil bath, Glass, 3.5L, inner Ø 230 mm,100 mm height (SCHOTT)
	without spout	
213135409	G1000-S	Oil bath, Glass, 900mL, inner Ø 140 mm,75 mm height (SCHOTT)
213135906	G2000-S	Oil bath, Glass, 2L, inner Ø 190 mm,90 mm height (SCHOTT)
213136302	G3500-S	Oil bath, Glass, 3.5L, inner Ø 230 mm,100 mm height (SCHOTT)

Stainless steel oil bath

> No eddy current losses
> High magnetic adhesion force
> Very good heat transfer (3 L beaker and up: due to a round deepening area for fitting heating plates with Ø 135 mm)

Order No.	Model	Description
H220001	H1500	Beaker, stainless steel, 1.5 l, inner Ø 160 mm, 90 mm height
H220002	H2000	Beaker, stainless steel, 2.0 l, inner Ø 160 mm, 120 mm height
H220003	H3000	Beaker, stainless steel, 3 l, inner Ø 200 mm, 110 mm height
H220004	H5000	Beaker, stainless steel, 5 l, inner Ø 240 mm, 115 mm height
H220005	H8000	Beaker, stainless steel, 8 l, inner Ø 260 mm, 150 mm height

Cylindrical heating block

Order No.	Description	For
13696-01W	Stainless T-shape handle, length: 20cm	
13696-02W	Stainless T-shape handle, length: 30cm	
13697-01W	28 × 30 (ID x H in mm) 11 Holes	WH240-R,WH260-R
13697-02W	28 × 50 (ID x H in mm)11 Holes	WH240-R,WH260-R
13697-03W	26 × 30 (ID x H in mm)11 Holes	WH240-R,WH260-R
13697-04W	28 × 30 (ID x H in mm)11 Holes	WH240-R,WH260-R
13697-11W	28 × 30 (ID x H in mm)15 Holes	WH240-R,WH260-R
13697-12W	28 × 50 (ID x H in mm)15 Holes	WH240-R,WH260-R
13697-13W	26 × 30 (ID x H in mm)15 Holes	WH240-R,WH260-R
13697-14W	26 × 50 (ID x H in mm)15 Holes	WH240-R,WH260-R
13699-04W	For mid size flasks; Holes: 4	WH240-R,WH260-R
13699-03F	69 mm Diameter,3 Holes	WH240-R,WH260-R
13699-05W	48.5 mm Diameter,5 Holes	WH240-R,WH260-R
13699-150	62.2mm Diameter,4 Holes	WH240-R,WH260-R
13699-01W	100mL Beakers,3 Holes	WH240-R,WH260-R
13699-02W	62.2 mm Diameter,3 Holes	WH240-R,WH260-R
13707-250	250mL Beakers Form	WH240-R,WH260-R
13707-500	500mL Beakers Form	WH240-R,WH260-R
13707-1000	1000mL Beakers Form	WH240-R,WH260-R
13707-2000	2000mL Beakers Form	WH240-R,WH260-R


13697-01W


13697-02W


13697-03W


13697-04W


13697-11W


13697-12W


13697-13W


13697-14W


13699-04W


13699-03F


13699-05W


13699-150


13699-01W
13699-02W


13707-250


13707-500


13707-1000


13707-2000

Magnetic Stirrers

> LED display for convenient control and monitoring of the stirring speed
> Leading microprocessor control technology ensures accuracy and stability of the stirring speed
> Stirring plate surface made of stainless steel
> Wide speed range between 150 and 1500 rpm
> Individual control for each plate

For stirrer bars, please reference Page 73

Best-seller!

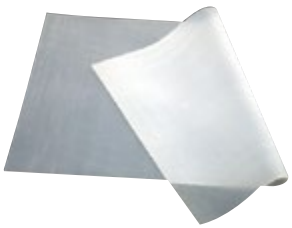
Specifications

Model	WH-210D	WH-410D	WH-610D
Display Mode	LED	LED	LED
Speed Range (rpm)	150 ~ 1500	150 ~ 1500	150 ~ 1500
Number of Plates	1	4	6
Mixing Capacity (ml)	50 ~ 3000	50 ~ 2000	50 ~ 2000
Plate Dimensions (W × L)	158×143	(151×156)×4	(151×156)×6
Overall Dimensions (W × L × H)	189×215×48	344×377×48	504×377×48
Order No.	400214	400215	400216

Corrosion resistant mat for Magnetic Stirrer

> Corrosion sistant and protect the surface of magnetic stirrer
> The surface is non-slippery, with adhesive layer on the back, which is easy to fix.
> Repeatedly for use and can be replaced

Order No.	400214-PTFE	400215-PTFE	400216-PTFE
Suitable for	WH-210D	WH-410D	WH-610D
Material	PTFE	PTFE	PTFE
Thickness	0.18mm	0.18mm	0.18mm
Attachment strength	25N/100mm	25N/100mm	25N/100mm
Tensile strength	400/100mm	400/100mm	400/100mm
Temperature range	70~260℃	70~260℃	70~260℃
Size	158mmx170mm	317mmx325mm	317mmx485mm



Submersible Magnetic Stirrers

Fully encapsulated and hermetically sealed PP housing, and suitable for the use in incubators and ovens. Water-,dust-, and germ proof,Submersible in water.

Order No.	S-1	B-1
Speed (rpm)	100 ~ 1500	100 ~ 1500
Temp. Range(℃)	0 ~ +60	0 ~ +60
Housing material	PP	PP
Mixing capacity (mL)	10 ~ 1000	50 ~ 3000
Plate Dimension(mm)	70X70X28	155X155X45
Connection Cable to Controller	1m	1m
Accessories	Connection adapter to fix the stirrer as one multi-position stirrer	
	S-1-01	B-1-01

Controller for submersible magnetic stirrers

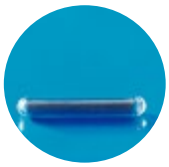
Order No.	CS-1	CB-1	CS-4	CB-4
Speed Control	Scale			
Dimension (mm)	95X158X56			
Stirring Drive	S-1	B-1	S-1	B-1
Number of stirring drive cable connected	4	4	4	4
Speed controlling mode	same speed for 4 drives		4 different specs for 4 drives	

Cylindrical Stirrer Bars

Cylindrical Stirrer Bars have a smooth round profile.
A popular general purpose stirrer for a wide varity of applications.

Glass Covered Stirrer Bars

For use with very abrasive media which may erode PTFE



Plain Stirrer Bars

Plain Stirrer Bars have a similar action to cylindrical but give more turbulence at low speed.

Octahedral Stirrer Bars

Octahedral Stirrer Bars use a similar action to Pivot Ring type but with increased turbulence at low speeds.

Oval Stirrer Bars

Oval Stirrer Bars are for use in round bottomed flasks.

Cross Stirrer Bars

Cross Stirrer Bars are very stable general purpose stirrers.

Double Ended Stirrer Bars

Double Ended Stirrer Bars have a double paddle action for efficient stirring plus high stability.

Tube Stirrer Bars

Tube Stirrer Bars are designed for use with 10mm standard cuvettes.

Colored Octahedral Stirrer Bars

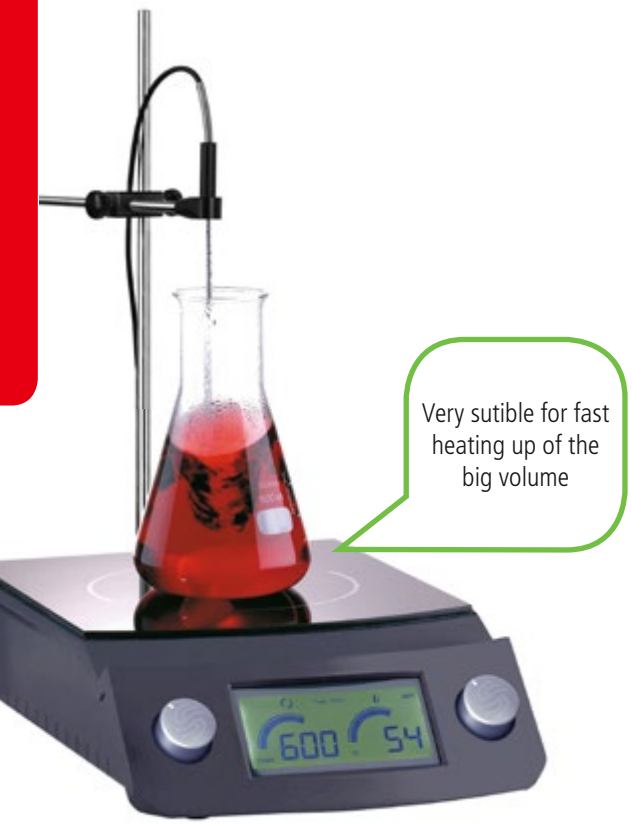
Colored Octahedral Stirrer Bars are for use where identification is of prime importance.

Micro Stirrer Bars

Micro Stirrer Bars are for the very smallest containers.
Note: Always use the largest stirrer bar possible.

Stirrer Bars

Order No.	Name	Description
1.110.6	CylindricalStirBar	Length:10mm,Diameter:6mm
1.115.6	CylindricalStirBar	Length:15mm,Diameter:6mm
1.120.7	Cylindrical Stir Bar	Length: 20mm, Diameter: 7mm
1.120.8	CylindricalStirBar	Length:20mm,Diameter:8mm
1.125.8	CylindricalStirBar	Length: 25mm, Diameter: 8mm
1.130.8	CylindricalStirBar	Length:30mm,Diameter:8mm
1.140	CylindricalStirBar	Length:40mm,Diameter:8mm
1.145	CylindricalStirBar	Length:45mm,Diameter:8mm
1.150	CylindricalStirBar	Length:50mm,Diameter:8mm
1.180	CylindricalStirBar	Length:80mm,Diameter:10mm
1.1212	Glass Covered Stir Bar	Length: 12mm, Diameter: 5mm
1.1225	Glass Covered Stir Bar	Length: 25mm, Diameter: 6mm
1.1245	Glass Covered Stir Bar	Length: 45mm, Diameter: 8mm
1.1260	Glass Covered Stir Bar	Length: 60mm, Diameter: 8mm
1.215.6	Plain Stir Bar	Length: 15mm, Diameter: 6mm
1.220.7	Plain Stir Bar	Length: 20mm, Diameter: 7mm
1.230.7	Plain Stir Bar	Length: 30mm, Diameter: 7mm
1.240	Plain Stir Bar	Length: 40mm, Diameter: 8mm
1.250	Plain Stir Bar	Length: 50mm, Diameter: 8mm
1.260	Plain Stir Bar	Length: 60mm, Diameter: 10mm
1.270	Plain Stir Bar	Length: 70mm, Diameter: 10mm
1.280	Plain Stir Bar	Length: 80mm, Diameter: 10mm
1.515	Octahedral Stir Bar	Length: 15mm, Diameter: 8mm
1.525	Octahedral Stir Bar	Length: 25mm, Diameter: 8mm
1.538.10	Octahedral Stir Bar	Length: 38mm, Diameter: 10mm
1.551.10	Octahedral Stir Bar	Length: 51mm, Diameter: 10mm
1.575.10	Octahedral Stir Bar	Length: 75mm, Diameter: 13mm
1.620	Oval Stir Bar	Length: 20mm, Diameter: 10mm
1.625.10	Oval Stir Bar	Length: 25mm, Diameter: 10mm
1.630	Oval Stir Bar	Length: 30mm, Diameter: 16mm
1.635	Oval Stir Bar	Length: 35mm, Diameter: 16mm
1.640	Oval Stir Bar	Length: 40mm, Diameter: 20mm
1.650.17	Oval Stir Bar	Length: 50mm, Diameter: 17mm
1.650	Oval Stir Bar	Length: 50mm, Diameter: 20mm
1.2402	Cross-Shaped Stir Bar	Length: 20mm, Diameter: 8mm
1.2405	Cross-Shaped Stir Bar	Length: 38mm, Diameter: 11mm
1.2407	Cross-Shaped Stir Bar	Length: 60mm, Diameter: 20mm
1.1335	Double Ended Stir Bar	Length: 35mm, Diameter: 8mm
1.1355	Double Ended Stir Bar	Length: 55mm, Diameter: 8mm
1.1335-R/B/Y	Double Ended Stir Bar	Length: 35mm, Diameter: 8mm
1.1355-R/B/Y	Double Ended Stir Bar	Length: 55mm, Diameter: 8mm
1.420	Triangular Stir Bar	Length: 20mm, Diameter: 8mm
1.440	Triangular Stir Bar	Length: 40mm, Diameter: 14mm
1.450	Triangular Stir Bar	Length: 50mm, Diameter: 12mm
1.480	Triangular Stir Bar	Length: 80mm, Diameter: 14mm
1.4136	Triangular Stir Bar	Length: 136mm, Diameter: 36mm
1.1609	Tube Stir Bar	Length: 6mm, Diameter: 9mm
1.515-R,B/Y	Colored Octahedral Stir Bar	Length: 15mm, Diameter: 8mm
1.525-R,B/Y	Colored Octahedral Stir Bar	Length: 25mm, Diameter: 8mm
1.538-R,B/Y	Colored Octahedral Stir Bar	Length: 38mm, Diameter: 8mm
1.551.-R,B/Y	Colored Octahedral Stir Bar	Length: 51mm, Diameter: 8mm
1.575-R,B/Y	Colored Octahedral Stir Bar	Length: 75mm, Diameter: 13mm
1.802	Micro Stir Bar	Length: 2mm, Diameter: 2mm
1.806	Micro Stir Bar	Length: 6mm, Diameter: 3mm
1.808	Micro Stir Bar	Length: 8mm, Diameter: 1.5mm
1.813	Micro Stir Bar	Length: 13mm, Diameter: 3mm



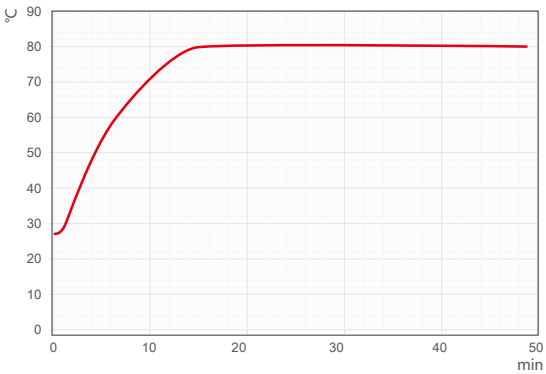
The laboratory hotplate SLK series
Optimized for all-round use

The first address for laboratory hotplates

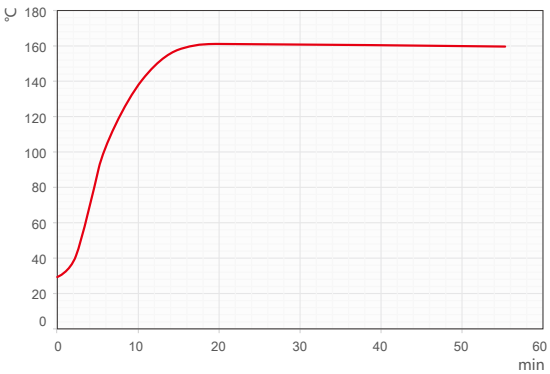
Infrared Hot Plates

- Smooth and corrosion resistant Ceramic Glass top plate
- Excellent transmittance of the infrared light
- Material can resist a thermal shock of up to 700℃
- Corrosion-resistant, solid casing which is hermetically sealed
- Fast heating and excellent temperature stability
- Temperature can be externally controlled by the connection of a Pt100 temperature sensor
- Timer function of up to 1800 seconds for automatic heating
- Large LCD screen displays the set and actual temperature
- A high-temperature indicator warns the user and prevents burning injuries
- Compressed air connector optionally available for the use of the hotplate in an aggressive environment
- Rod holder can be conveniently used to connect diverse accessories such as a temperature sensor
- SLK1 / SLK2 Infrared Hot Plates employ a 24 step temperature regulator
- SLK2-T can be connected to an external temperature sensor for direct and precise temperature control

The data for SLK2-T is based on heating up 1 liter water to a target temperature of 80℃ with external temperature sensor.



The data for SLK2-T is based on heating up 1 liter Silicone oil to a target temperature of 160℃ with external temperature sensor.



Note: Above data is based on the 220V/50Hz instrument with pure water (H_2O) and simethicone (Silicon Oil).

Specifications

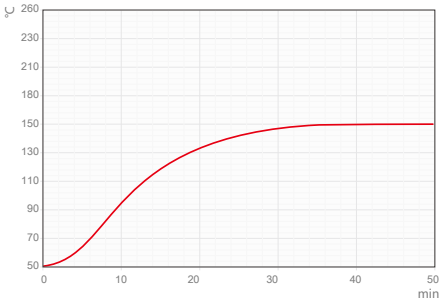
CE

Model	SLK1	SLK2	SLK2-T
Display Mode	LCD	LCD	LCD
Heating power (kW)	1.2	1.8 (1.5 for 110V equipment)	1.8 (1.5 for 110V equipment)
Max. Set Temperature (top plate) (℃)	550	550	550
Min. Time to Boiling Point for 1L H_2O (min)	10	7	7
Top Plate Area (W x L in mm)	285 x 285	285 x 285	285 x 285
Heating Zone (mm)	Ø 155	Ø 190	Ø 190
Temperature Sensor Connector	-	-	Available
Top Plate Material	Ceramic Glass	Ceramic Glass	Ceramic Glass
Dimensions (L x W x H in mm)	395 x 295 x 110	395 x 295 x 110	395 x 295 x 110
Maximum Capacity (L)	25	25	25
Admissible Ambient Temperature (℃)	10-40	10-40	10-40
Admissible Air Humidity (%)	85	85	85
Protection Category	IP20	IP20	IP20
Protection Class	1	1	1
Order No.	285416616	285416324	285416398

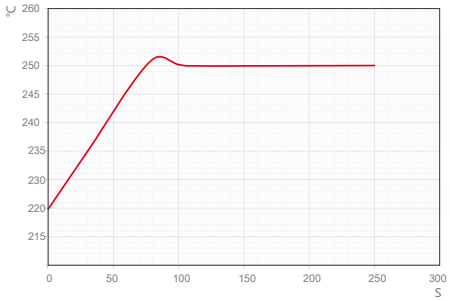
Digital Hot Plates

> PID temperature control technology for accurate and reliable results
> Suitable for complicated temperature control requirements
> Bright LED screen can display both set value and actual temperature
> Convenient temperature setting via on-touch control
> Timer function for automatic heating up to 100 hours
> Alarm signal output which can be applied to stop the operation of the hot plate and the other connected devices
> External Pt100 temperature sensor connection for direct and precise control of the actual temperature

The data for H200D-2K heating up the high-temperature oil from 50 to 150℃ (with external temperature sensor)



The surface temperature stability data for WH200D-2K (250℃)



Note: Above data is based on the 220V/50Hz instrument with pure water (H_2O) and simethicone (Silicon Oil).

Specifications

Order No.	WH200D-1K	WH200D-2K	WH200D-3K
Display Mode	LED	LED	LED
Temperature Stability (℃)	±2	±2	±2
Hot plate material	Aluminum coated with ceramic	Aluminum coated with ceramic	Aluminum coated with ceramic
Set Temperature Range (top plate) (℃)	50~300	50~300	50~300
Set Temperature Range (with Pt100 sensor) (℃)	40~300	40~300	40~300
Power (W)	680	1000	1500
Dimensions (W x L in mm)	170X170	320X320	400X300
Outer Dimensions (W x L x H mm)	240X280X70	320X360X70	470X410X70
Order No.	400110	400111	400112

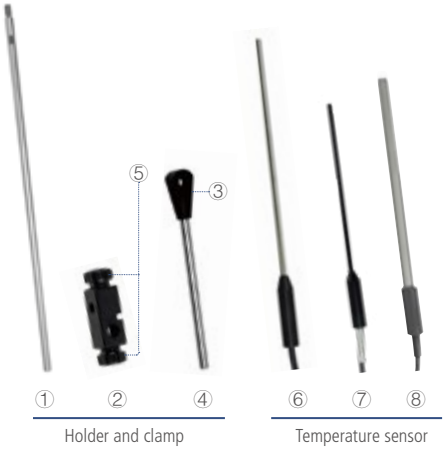
Accessories

PT100 Temperature sensor

Order No.	Model	Description
PT100-01	PT100	Type I, -30~300℃ ;Length: 170 mm; Diameter: 4 mm; Material: Stainless steel;
PT100-02	PT100	Type II, -30~300℃ 'Length: 300 mm; Material: Stainless steel, Fig ⑥
PT100-03	PT100	Type III, -30~250℃ ; Length: 170 mm; Material: Stainless steel, PTFE coated, Fig ⑦
PT100-04	PT100	Type IV, -30~250℃ ;Length: 300 mm; Material: Stainless steel, PTFE coated
PT100-06	PT100	Type VI, -30~300℃ ; Length: 250 mm; Diameter: 4 mm; Material: Glass;, Fig ⑧

Holder for Temperature Sensor

Order No.	Model	Description
PT100-05	Holder and clamp for PT100 temperature sensor	Fixed temperature sensor
	PT100-05: ①②③④⑤	
WH220017	① Installation stand	M8x10x400mm
WH220026	② Boss head clamp	Aluminum
WH220027	③ Sensor holder	POM
WH220095	④ Holding rod	M8x8x200mm
WH220096	⑤ Clamp screws	M6x22x15mm



WIGGENS
THE MAGIC MOTION

Multi-Purpose Heater / Dry Bath

Microprocessor control
The built-in unique microprocessor can provide precise temperature control for a variety of biochemical experiments.

Heating chamber in one piece
Heating chamber is made of one-piece aluminum with PTFE coating and can work as a small water bath.

Various optional heating blocks
Various types of heating block are available for option, mass customization is acceptable.

Three types of timer modes
OFF,OFF-TIME, and WAIT-TIME

Certification
CE certification

Applications
> Molecular biology
> Biochemistry

Precise temperature control!
> Rapid heat up rates
> Exceptional temperature uniformity
> PT 100 temperature sensor included in the delivery

Best-seller!

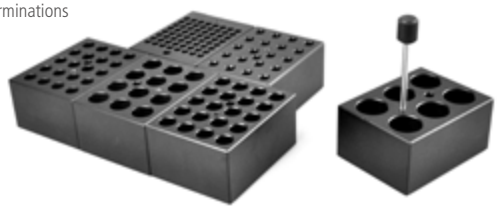
CE

Specifications

Model	WD310	WD320
Set Temperature Range(℃)	40-150 (with PT-100 sensor) 50-150 (without PT-100 sensor)	
Temperature Stability (℃)	±0.1	±0.1
Temperature Accuracy (℃)	±0.1	±0.1
Temperature Safety (℃)	Cut off at 170	Cut off at 170
Setting Time (min)	1~9959 / OFF	1~9959 / OFF
Block No.	1	2
Display	4 1/2'' LED	4 1/2'' LED
Outer Dimensions (W x L x H mm)	200 x 270 x 80	200 x 270 x 80
Heating Block Dimensions (W x L x H mm)	79 x 104 x 50	79 x 104 x 50
Order No.	179310	179320

WIGGENS® dry block heaters are highly versatile suitable for broad range of applications.

> DNA extractions
> DNA analysis
> Melting point determination
> Nucleic acid hybridization
> Coagulation studies
> Biochemical processes
> Incubation and activation of cultures
> Blood examinations
> Fertile ground processing
> Restriction digest
> Denaturation
> Boiling point determination
> Enzymatic processes
> Enzyme activity studies
> Blood-urea-nitrogen determinations
> Immunoassays
> Enzyme reactions
> In situ hybridization



Heating Blocks for WD310 and WD320

Order No.	Size	Number of Holes	Ø x H (mm)
179300-01	0.2mL	64	6x17mm
179300-02	0.5mL	20	8x25mm
179300-03	1.5mL(or2.0)	20	11x35mm
179300-04	10mL	20	10x33mm
179300-05	13mL	20	13x36mm
179300-06	20mL	12	20x48mm
179300-07	25mL	6	25x45mm
179300-10	17mL	12	17x44mm

COD Reactor

Features

Compliance with regulations
WD325 COD reactor is used to digest closed micro reflux COD vial and can meet USEPA 410. 4. It is easier and safer than traditional open macro reflux method.

Special COD program
Just press start/stop button, the reactor starts to heat up to 150℃ and keep for 2-hour countdown then shut down automatically with 10-sec audio alarm.

3 additional program settings
Temperature range setting 60℃ - 200℃ and timer from 1 - 999. Built-in 3 additional heating program settings available for users to store and execute as needed.

Auto shut off and audio alarm
WD325 can stop heating then shut off automatically with audio alarm when every program is completed.

Applications

> Waste water from factories
> Water quality in lake, pond and river

Specifications

Model	WD325
Display	4 digital LED of set temperature, set time, process temperature, residual time display.
Timer	1~1999 minutes with audible alarm and automatic shutoff or continuous operation
Accuracy	± 2℃ (at 150℃)
Set temperature range	Fixed 150℃ (COD program) 60℃ ~200℃ , adjustable.
Housing structure	Stainless steel with powder paint coating
Block structure	Anodized aluminum
Safety	Hot top indicator (flashing when block temperature is over 70℃), Automatic shutoff when block temperature is over 240℃
Power	AC110V, 60Hz (AC220V, 50Hz), 220Watt
Block capacity	Ø16.5*55mm (25) sample vials, Optional block is available.
Outer Dimensions	189 x 116 x 315 (W x L x H mm)
Order No.	179200-22

WIGGENS
THE MAGIC MOTION

Heating Mantles Multi-Position Heating mantles

WIGGENS combination mantles have always been the mantles of choice for repetitive extracting, refluxing, and distilling procedures in labs of the food, textile fiber, water and waste-water, petroleum, and many other industries. WIGGENS latest version offers safety and convenience never before available in a multi-place heating mantle.

> Lower profile for space-saving convenience
> Revolutionary heating element container system makes replacing burned-out elements a simple task
> Clear anodized aluminum cabinet with black PTFE resin coated top for chemical resistance.
> Offered in two space-saving configurations; six-place for 100 - 300 mL flasks and three-place for 500 - 1,000 mL flasks
> Available in low-temperature (400℃ RX version) and high-temperature (600℃ RJ version) for greater versatility
> The ideal mantle for Kjeldahl, Soxhlet, and other extraction procedures.

3-Place heating mantle with digital display controller

Each six-place Combo is furnished with six spring-type glassware clamps, and each three-place unit contains three. The clamps hold glassware from 1 5/8" - 2" in diameter. The clamps attach to one of the horizontal support rod (included).
Two Series RL control choices are available percentage timer or proportional voltage. The percentage-timer version pulses full-line voltage to each heating position according to the dial setting. The proportional-voltage version supplies a constant, steady-state voltage to each position. The six-place controls are actually two units that can be mounted together or separately. The cord-connected controls allow placement at a convenient location for the operator.

6-Place heating mantle with digital display controller

Power Controls

> 3 place w/one quick attach open face bracket for 1/2" diameter rod
> 6 place w/two quick attach open face bracket for 1/2" diameter rod.

Dimensions

3-place: 610 x 286 x 159 (WxDxH mm)
6-place: 743 x 241 x 133 (WxDxH mm)

The replaceable element containers provide spill containment and can be replaced in a matter of a few minutes.

Table A

Flask Size ml	Maximum Diameter mm	Bottom	Rating Per Position	Mantle Weight kg	Replacement Element Order No.	Order No.
Three-Place - low temperature						
500	103	Flat	180W	9.1	RX50024E	RX50024
500	101	Round	180W	9.1	RX50224E	RX50224
650	108	Round	200W	9.1	RX65024E	RX65024
800	116	Round	225W	9.1	RX80024E	RX80024
1000	130	Round	290W	9.1	RX100024E	RX100024
Three-Place - high temperature						
500	103	Flat	300W	9.1	RJ50024E	RJ50024
500	101	Round	300W	9.1	RJ50224E	RJ50224
650	108	Round	325W	9.1	RJ65024E	RJ65024
800	116	Round	375W	9.1	RJ80024E	RJ80024
1000	130	Round	450W	9.1	RJ100024E	RJ100024
Six-Place - low temperature						
250/300	87	Flat	125W	8.6	RX30024E	RX30024
250/300	87	Round	125W	8.6	RX30424E	RX30424
Six-Place - high temperature						
100/125	70	Flat	140W	8.6	RJ12524E	RJ12524
100/125	70	Round	140W	8.6	RJ12724E	RJ12724
250/300	87	Flat	210W	8.6	RJ30024E	RJ30024
250/300	87	Round	210W	8.6	RJ30424E	RJ30424

The glassware is not included, please order separately.

How to order

Select the heating mantle from Table A based on the flask being used, the power needed for the application, and the operating voltage. Generally, the RX units are used with solvents common to Soxhlet extractions, and the RJ units are for refluxing aqueous solutions. Select the required power control from Table B based on mantle configuration (3-place or 6-place) and whether pulsing on-off or constant-input voltage is desired.

Table B

Control Type	For Use With	Amps	Voltage(V)	Weight (kg)	Order No.
Digital display control	3-place RJ or RX	12	240	2.3	RL5324
Digital display control	6-place RJ or RX	15	240	5.0	RL5624
Percentage timer	3-place RJ or RX	12	240	2.3	RL3324
Percentage timer	6-place RJ or RX	15	240	5.0	RL3624
Proportional voltage	3-place RJ or RX	12	240	2.3	RL4324
Proportional voltage	6-place RJ or RX	15	240	5.0	RL4624

Recommend

Order the Combo control to match your application from the chart on the left.

Table C - Soxhlet Lipid Extraction Apparatus (for Combo Mantles)

Size	Flask volume (mL)	Extractor Top Joint	Extractor Bottom Joint	Package Order No.	Condenser Order No.	Extractor Order No.	Extraction Thimbles Order No.	Flask volume Order No.
Suitable for Wiggens Combo Mantles (Six positions Flat Bottom)								
A	100	34 / 45	24 / 40	189100-11	189102-01	189101-01	189103-01	189105-01
A	100	34 / 45	24 / 40	189100-12	189102-01	189101-01	189103-02	189105-01
A	125	34 / 45	24 / 40	189100-13	189102-01	189101-01	189103-01	189105-02
A	125	34 / 45	24 / 40	189100-14	189102-01	189101-01	189103-02	189105-02
B	250	45 / 50	24 / 40	189100-15	189102-02	189101-02	189103-03	189105-03
B	250	45 / 50	24 / 40	189100-16	189102-02	189101-02	189103-04	189105-03
D	300	55 / 50	24 / 40	189100-17	189102-03	189101-04	189103-05	189105-04
D	300	55 / 50	24 / 40	189100-18	189102-03	189101-04	189103-06	189105-04
Suitable for Wiggens Combo Mantles (Six positions Round Bottom)								
A	100	34 / 45	24 / 40	189100-21	189102-01	189101-01	189103-01	189104-01
A	100	34 / 45	24 / 40	189100-22	189102-01	189101-01	189103-02	189104-01
A	125	34 / 45	24 / 40	189100-23	189102-01	189101-01	189103-01	189104-02
A	125	34 / 45	24 / 40	189100-24	189102-01	189101-01	189103-02	189104-02
B	250	45 / 50	24 / 40	189100-25	189102-02	189101-02	189103-03	189104-03
B	250	45 / 50	24 / 40	189100-26	189102-02	189101-02	189103-04	189104-03
D	300	55 / 50	24 / 40	189100-27	189102-03	189101-04	189103-05	189104-04
D	300	55 / 50	24 / 40	189100-28	189102-03	189101-04	189103-06	189104-04
Suitable for Wiggens Combo Mantles (Three positions Flat Bottom)								
D	500	55 / 50	24 / 40	189100-31	189102-03	189101-04	189103-05	189105-05
D	500	55 / 50	24 / 40	189100-32	189102-03	189101-04	189103-06	189105-05
Suitable for Wiggens Combo Mantles (Three positions Round Bottom)								
D	500	55 / 50	24 / 40	189100-41	189102-03	189101-04	189103-05	189104-05
D	500	55 / 50	24 / 40	189100-42	189102-03	189101-04	189103-06	189104-05
D	1000	55 / 50	24 / 40	189100-43	189102-03	189101-04	189103-05	189104-06
D	1000	55 / 50	24 / 40	189100-44	189102-03	189101-04	189103-06	189104-06

Soxhlet 6-Plate Heater

The design concept of WH-106 is compactness, safety and efficiency. For compactness, the layout of hotplates has been changed from traditional 6 holes in one row to 3 each in 2 rows. So that we can save 50% operating space.
The distance between each hole is 55mm which is according to DIN 44548 and wide enough for users to handle the samples in back row conveniently. WH-106 contains six embedded heating plates with 85mm diameter, and its heating components are made in Germany, rugged and easy to maintain. Each plate with a heating indicato is controlled independently, and the temperature can reach 425℃ . For safety reason, each plate is surrounded by a rim for keeping electronics from spilling. The whole housing is made of stainless steel with paint coating.

Applications

> COD digestion
> Lipid extraction
> Kinds of heating

Specification

Modle	WH-106
Heating plate	6 × Ø85mm diameter cast-iron with embedded heating resistor
Safety	Each top plate is surrounded by a rim that protect electronics from spills. Spacing of 55mm between the heating plate which is according to DIN 44548.
Max. Temperature	425℃
Control	Each heating plate is controlled independently
Power supply	6 × 450W
Order No.	178106

Parallel reaction for Soxhlet extraction

WIGGENS
THE MAGIC MOTION

Soxhlet Lipid Extraction Apparatus (Suitable for WH-106)

Size	Flask volume (mL)	Extractor Top Joint	Extractor Bottom Joint	Package Order No.	Condenser Order No.	Extractor Order No.	Extraction Thimbles Order No.	Flask volume Order No.
A	125	34 / 45	24 / 40	189100-01	189102-01	189101-01	189103-01	189105-02
A	125	34 / 45	24 / 40	189100-02	189102-01	189101-01	189103-02	189105-02
B	250	45 / 50	24 / 40	189100-03	189102-02	189101-02	189103-03	189105-03
B	250	45 / 50	24 / 40	189100-04	189102-02	189101-02	189103-04	189105-03
B	300	45 / 50	24 / 40	189100-05	189102-02	189101-02	189103-03	189105-04
B	300	45 / 50	24 / 40	189100-06	189102-02	189101-02	189103-04	189105-04
D	500	55 / 50	24 / 40	189100-07	189102-03	189101-04	189103-05	189105-05
D	500	55 / 50	24 / 40	189100-08	189102-03	189101-04	189103-06	189105-05

Specifications for Wiggens Extractor Bodies

Specification				
Size	A	B	C	D
Use Thimble Size (mm)	25 x 85	35 x 90	35 x 90	45 x 130
Extractor Top Joint	34 / 45	45 / 50	45 / 50	55 / 50
Extractor Bottom Joint	24 / 40	24 / 40	29 / 42	24 / 40
Condenser Bottom Joint	34 / 45	45 / 50	45 / 50	55 / 50
Length of Siphon (mm)	190	260	260	300

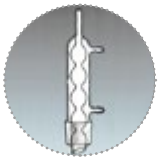
Extraction Thimbles - Glass

With an Wiggens fritted disc sealed in. Can be used in any standard Soxhlet extraction apparatus. The sizes below correspond to the size specifications of extraction bodies and will fit those units.

Size	A	A	B/C	B/C	D	D
ID x H (mm)	25 x 85	25 x 85	35 x 90	35 x 90	45 x 130	45 x 130
Sintered glass	20-35um	100-200 um	20-35um	100-200 um	20-35um	100-200 um
Order No.	189103-01	189103-02	189103-03	189103-04	189103-05	189103-06

Extractor Body

Size	A	B	C	D
Extractor Top Joint	34 / 45	45 / 50	45 / 50	55 / 50
Extractor Bottom Joint	24 / 40	24 / 40	29 / 42	24 / 40
Order No.	189101-01	189101-02	189101-03	189101-04



Extraction Apparatus

Bulb type for use with regular extraction apparatus. Improved design permits greater condensing capacity.

Size	A	B/C	D
Extractor Top Joint	34/45	45/50	55/50
Tubing Size (mm)	190	260	300
Height (mm)	275	365	405
Order No.	189102-01	189102-02	189102-03

Extraction Thimbles

CELLULOSE FIBER. Good retention. Seamless, high quality extraction thimbles, single thickness.
Readily permeable to the flow of ether and other organic solvents. Packed 25 per box.

Size (Ø x H)	27 x 80	27 x 60	30 x 80	33 x 94	40 x 123
Order No.	6811-08	6811-14	6811-20	6811-22	6811-24

Flask

Round bottom with short neck and outer joint.

24/40 Joint

Capacity(mL)	100	125	250	300	500	1000
Order No.	189104-01	189104-02	189104-03	189104-04	189104-05	189104-06

29/42 Joint

Capacity(mL)	100	250	500	1000
Order No.	189104-11	189104-13	189104-15	189104-16

Flask

Single Neck, Flat Bottom

24/40 Joint

Capacity(mL)	100	125	250	300	500	1000
Order No.	189105-01	189105-02	189105-03	189105-04	189105-05	189105-06

29/42 Joint

Capacity(mL)	250	300	500	1000
Order No.	189105-13	189105-14	189105-15	189105-16

Temperature and stirring controller

for measuring, control and monitoring

WIGGENS temperature controllers measure, control and monitor applications in laboratories such as heating mantle and chemical reactors.

T Temp. C Control S Safety S Stirring





Ordering Information

Models / Specifications		TCSS	PL524 Pre	PL524 Pro-Stir	PL524 Pro	PC524
Name		Program controller for temperature and stirring	Program controller for temperature	Temperature and stirring controller	Temperature controller	Safety temperature protector
Screen	5" TFT touch screen	●	●			
	LED			●	●	●
Function	Heating	●	●	●	●	
	Cooling	●	●			
	Programming	●	●			
	Stirring	●		●		
	Safety temperature	●	●	●	●	●
Interface	RS485	●	●			
	RS232	●	●	●	●	
	Ethernet	●	●	●		
	USB-A	●	●			
	Alarm	●	●	●	●	
Options	Pt100	○	○	○	○	○
	Thermocouple	○	○	○	○	○
	heating mantle	○	○	○	○	
	matching unit	○ please reference Note 3		○ please reference Note 3		
	Solenoid valve for cooling	○				
	WH260 series					

Temperature,Stirring Speed,Cooing Valve Controller

Program temp. Control and security protection

Temp. and Stir. Controller

Temp. Control and security protection

Overheated security protection

Note 1: ● Standard configration ○ Options

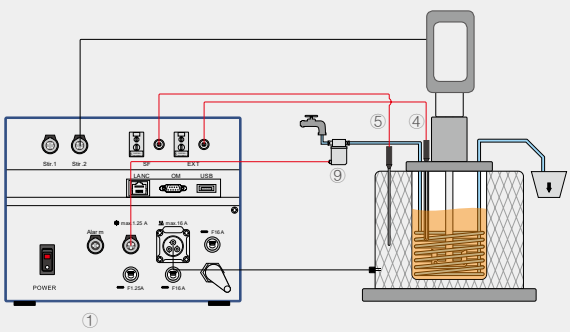
Note 2: TCSS, PL524 Pre, PL524 Pro-Stir, PL524 Pro working with two temperature sensors; PC524 just need one temperature sensor

Note 3: TCSS-1 matching with heating-stirring mantle, PL524pro-Stir matching with heating-stirring mantle

TCSS-2 matching with WB201C motor (It is the same motor as WB2000-C)

TCSS-3 matching with WB181D motor (It is the same motor as WB1800-D)

TCSS-4 matching with WB181C motor (It is the same motor as WB1800-C)



Application of TCSS

The external system (e.g. Heating mantle, Motor, Solenoid valve) is connected via socket at the back, Different sensors for working and safety temperatures control the application.

① TCSS-2 / 3 / 4
② Motor
③ Magnetic Clutch
④ Working sensor
⑤ Safety sensor
⑥ Heating mantle
⑦ Stirrer
⑧ Cooling coil
⑨ Solenoid valve

WIGGENS
THE MAGIC MOTION

Heating Mantles

Aluminum Housed Mantles

> Rigid housing provides strength and durability while supporting the weight of the vessel
> Fabric interior to softly nest glass vessels and reduce the chance of thermal shock
> Adaptable to most vessels including larger sizes
> Withstands 450℃ internal operating temperature (650℃ for Series STM), enough power for most applications
> Can be adapted to special applications with custom sizes, bottom holes, and special electrical devices
> Feet on smaller sizes designed to provide stability and promote cooler exterior temperatures

Spherical Flask Mantles

> The Series TM spherical flask mantle covers only the flask's bottom half, letting you see its full contents. Larger sizes have multiple circuits for ease of temperature control when a flask is less than half full. Splash Guards can be used with TM102 through TM117.
> Poncho Safety Shields can be used with sizes 500 ml (TM107) and larger.

Specifications

Complete System Order No.	Order No.	Flask Capacity mL	Max. Flask Diameter mm	Watts W	Depth mm	Outside Dia. mm	Height mm	Weight kg
WTM95	TM95	50	48	60	24	159	121	1.0
WTM97	TM97	100	60	80	30	159	121	1.0
WTM99	TM99	125	70	80	35	159	121	1.0
WTM101	TM101	200	76	100	38	159	121	1.0
WTM103	TM103	250	83	180	41	159	121	1.1
WTM105	TM105	300	86	180	43	159	121	1.1
WTM107	TM107	500	101	270	51	159	127	1.1
WTM109	TM109	1000	130	380	65	191	127	1.4
WTM111	TM111	2000	170	500	86	254	152	2.1
WTM113	TM113	3000	183	500	91	254	152	2.1
WTM115	TM115	5000	220	600	109	305	178	2.8
WTM117	TM117	12000	293	2@650	147	419	229	6.8
WTM119	TM119	22000	347	2@770	173	483	254	8.5
WTM121	TM121	50000	456	3@1000	228	610	330	18.6
WTM122	TM122	72000	522	3@2000	259	660	356	20.0

WTM seires
Spherical flask mantle with temp. control and security protection, the flask is not included

TM seires
Spherical flask mantle only, the flask is not included

Stir Mantles

> The StirMantle adds electromagnetic stirring capability (50-750 rpm) to the Series TM heating mantle for spherical flasks. Heating and stirring are independent, choose either or both. Speed is easily adjusted by a single dial on the PL524pro-Stir.
> The PL524pro-Stir creates and synchronizes the magnetic field. When restarting (as for removal and reinsertion of the flask), Wiggens exclusive "Synchrostart" feature maintains linkage between the field and the bar. The PL524pro-Stir connects to the StirMantle by cord, so it may be placed outside corrosive hood atmospheres and is easily accessible.
> PL524pro-Stir connecting cords, and stir bar. Completely grounded and fused.

Specifications

Complete System Order No.	Order No.	Flask Capacity mL	Depth mm	Watts W	Outside Dia. mm	Height mm	Weight kg
EMS103P	EMS103	250	42	180	159	121	2.0
EMS105P	EMS105	300	43	180	159	121	2.0
EMS107P	EMS107	500	51	270	159	133	2.0
EMS109P	EMS109	1000	65	380	191	140	2.4
EMS111P	EMS111	2000	85	500	254	165	2.5
EMS113P	EMS113	3000	91	500	254	165	2.9

Complete system of stir mantle (EMS1XXP)