

thermo scientific



# Thermo Scientific Heratherm Heating and Drying Ovens

Efficient, safe and easy

**ThermoFisher**  
SCIENTIFIC

# Thermo Scientific Heratherm Heating and Drying Ovens

## your samples

We are obsessed with sample integrity. Each of our new laboratory heating and drying oven is designed with sample protection as top priority.

## our obsession



**Heratherm® ovens are available in three different models. Choose gravity or mechanical convection technology.**

- **General Protocol** units are optimally suited to everyday heating and drying applications up to 250 °C.
- **Advanced Protocol** models provide the necessary technologies for users requiring ultimate accuracy and increased heating capability up to 330 °C.
- **Advanced Protocol Security** ovens offer additional safety features aimed at ultimate protection of your most precious samples and products up to 330 °C.

Sizes include three table top models of 60 L, 100 L and 180 L, and two free standing models of 400 L and 750 L.



Thermo Scientific Heratherm ovens family includes optional stainless steel models. All units are **ccSAus** marked.



## Energy efficient

The new Heratherm ovens feature an environmentally friendly design with cost savings in mind, reducing energy consumption by as much as 25% compared to previous models.\*\*

### Discover why laboratories across the globe rely on Thermo Scientific products every day.

From simple drying of glassware to the most complex and carefully controlled heating applications, your oven is an invaluable part of your daily work. The Heratherm oven range includes an array of solutions to match your needs – and are backed by a two-year warranty on parts and labor, meaning confidence for your investment.\*

\*Subject to Thermo Fisher Scientific Standard Limited Warranty. See [www.thermofisher.com](http://www.thermofisher.com) or product literature for details.

## efficient

- Improving energy efficiency, increasing cost effectiveness, reducing environmental impact compared to previous models\*\*
- Unique door design reduces heat emission
- Timer for effective usage and additional energy savings
- Space saving footprint without compromising volume
- Flexible shelving system allows for optimal space utilization

## safe

- Smart safety system surveys functionality of oven consistently
- Temperature uniformity as good as  $\pm 1.3^{\circ}\text{C}$  at  $150^{\circ}\text{C}$
- Automatic audible and visual over-temperature alarm
- Access port for data logging with independent sensors
- Low external surface temperature for easy handling

## easy

- Easy-to-read, large vacuum fluorescent display
- Easy setting with intuitive interface
- Easy cleaning with rounded corners

\*See [www.thermoscientific.com](http://www.thermoscientific.com) or product literature for details. Subject to Thermo Fisher Scientific Standard Limited Warranty.  
\*\*Based on internal testing 10/2010

# Innovative technology for outstanding versatility



HERATHERM FEATURES	GENERAL PROTOCOL OVENS		ADVANCED PROTOCOL OVENS		ADVANCED PROTOCOL SECURITY OVENS
	table top	large capacity	table top	large capacity	table top
Temperature range	50 °C <sup>1</sup> - 250 °C		50 °C <sup>1</sup> - 330 °C	50 <sup>1</sup> °C - 250 °C	50 °C <sup>1</sup> - 330 °C
Interior material	stainless steel AISI 430		stainless steel AISI 304		stainless steel AISI 304
Rounded interior corners		✓		✓	✓
Microprocessor control		✓		✓	✓
Automatic overtemperature alarm		✓		✓	✓
Stackable with optional stacking kit	✓	•	✓	•	✓
Easy calibration routine		✓		✓	✓
Gravity convection	choice	✓	choice	•	choice
Mechanical convection	choice	•	choice	✓	choice
Timer functions	on/ off		choice of weekly/ hourly/ real time <sup>2</sup>		choice of weekly/ hourly/ real time <sup>2</sup>
Fresh air damper	manually controlled		electronically controlled		electronically controlled
Access port for independent data monitoring	use exhaust vent			✓	✓
RS232 interface		✓		✓	✓
Adjustable fan speed		•	5 speeds <sup>3</sup>	2 speeds <sup>3</sup>	5 speeds <sup>3</sup>
Programmable (ramps / dwells)		•		✓	✓
Boost function for accelerated heat-up		•	✓	•	✓
Optional stainless steel exterior		•	•	✓	✓
Dry alarm contact for connection of alarm device		•		✓	✓
Automatic undertemperature alarm		•		•	✓
Door alarm		•	•	✓	✓
Lockable door		•		•	✓
Connection for optional sample temperature sensor		•		•	✓

<sup>1</sup> Temperatures as low as ambient +10 °C can be selected – requires open damper and no additional heat in unit. <sup>2</sup> for details on timer see page 8. <sup>3</sup> Fan only on mechanical convection models; fan cannot be switched off, will run at least at ~20%; fan speed depends on temperature - with high temperatures, the fan will run faster to prevent overheating of motor. The fan continues running when opening the door.

## Convection technologies – your choice

# 01

### Mechanical convection

- Fast sample drying and heating
- Superior temperature uniformity
- Fast temperature recovery after door opening

# 02

### Gravity convection

- Gentle drying and heating with low air turbulences
- Perfect for working with materials that are sensitive to airflow such as powders and foils





# Select the right model for your needs

## Thermo Scientific Heratherm Ovens Selector Guide

APPLICATION	MATERIAL/ SAMPLE*	SAMPLE REQUIREMENTS	RECOMMENDED HERATHERM OVEN
Drying	Glassware	Fast drying	Gravity convection for gentle drying, mechanical convection for fast drying. Choose Advanced Protocol for highest temperature accuracy and selection of fan speed. Choose Advanced Protocol Security for additional sample safety. Check also our Thermo Scientific vacuum ovens for speedy drying at low temperatures <a href="http://www.thermoscientific.com/everylab">www.thermoscientific.com/everylab</a> .
	Powders	Gentle / fast drying	
	Paper, textile	Gentle / fast drying	
	Soil, sand	Gentle drying	
	Electronics	Gentle drying	
	Pharmaceutical preparations	Gentle drying	
Material testing	Cables	Highest temperature accuracy; safe processes	Advanced Protocol models with programming capabilities – mechanical convection models have highest temperature accuracy. Advanced Protocol Security models for additional sample safety.
	Plastics	Highest temperature accuracy; safe processes	
Curing	Paint	Gentle heating	Gravity convection for gentle heating. Choose Advanced Protocol for high temperature accuracy and Advanced Protocol Security for additional sample safety.
	Adhesives	Gentle heating	
	Plastics	Gentle heating	
	Metals	Gentle heating	
Heated storage	Pills, drugs	Gentle heating; safe processes	Gravity convection for gentle heating, or Advanced Protocol mechanical convection at low fan speed. Choose Advanced Protocol Security for additional sample safety.
Vulcanization	Rubber	Gentle heating	

### Footprint Comparison\*

Making the best use of valuable space in your lab, Heratherm ovens are designed with a very small footprint ratio compared to the interior volume. In addition they are stackable with an optional stacking kit.



manufacturer A

manufacturer B

For heat treatment and drying processes that involve flammable solvents or potentially explosive atmospheres, please talk to your Thermo Scientific representative.

### Maximized space efficiency



The free standing models enhance flexibility by easily moving around on their casters, which can be locked to ensure stable set-up of the units.

\*examples \*\*based on competitors' published specifications

# Thermo Scientific Heratherm General Protocol Ovens

Heratherm General Protocol table top ovens are perfect for routine daily work, providing the ideal heating and drying solution for your applications.



60 L, 100 L, 180 L models shown

Smooth inner casing with easy to clean rounded corners



technology  
for efficiency

- Low energy consumption
- Built in timer
- Excellent footprint/volume ratio
- Three sizes (60 L, 100 L, 180 L)
- Inner chambers made from corrosion-resistant stainless steel with rounded corners for easy cleaning

convenience  
for ease of use

- Large, easy to view vacuum fluorescent display
- Simple, microprocessor-based touch button controls
- Doors can be opened over 180° making these units easy to access
- Automatic overtemperature alarm system to protect samples

## Specifications table/order numbers General Protocol Ovens

Order number	51028112	51028872	51028874
Model	OGS60	OGS100	OGS180
Convection technology	Gravity convection	Gravity convection	Gravity convection
Temperature range	°C 50 °C <sup>1</sup> - 250 °C	50 °C <sup>1</sup> - 250 °C	50 °C <sup>1</sup> - 250 °C
Spatial temperature deviation	at 150 °C ± 4 °C	± 4.5 °C	± 5 °C
Temperature deviation over time	at 150 °C ± 0.4 °C	± 0.4 °C	± 0.4 °C
Footprint	m <sup>2</sup> / sqft 0.3 / 3.2	0.36 / 3.9	0.47 / 5.1
Chamber volume	L / cuft 65 / 2.3	105 / 3.75	176 / 6.2
Dimensions	chamber, mm / in (W x H x D) 328 x 480 x 415 / 12.9 x 18.9 x 16.3	438 x 580 x 414 / 17.2 x 22.8 x 16.3	438 x 680 x 589 / 17.2 x 26.8 x 23.2
	exterior <sup>2</sup> , mm / in (W x H x D) 530 x 755 x 565 / 20.9 x 29.7 x 22.2	640 x 855 x 565 / 25.2 x 33.7 x 22.2	640 x 955 x 738 / 25.2 x 37.6 x 29.1
Number of shelves	supplied / positions 2 / 13	2 / 16	2 / 19
Max. shelf load	kg / lb 25 / 55	25 / 55	25 / 55
Rated voltage / frequency	V / Hz 120 / 60	120 / 60	120 / 60
Rated power / max. current	W / A 1730 / 14.4	1680 / 14	1680 / 14
Energy consumption at 150° C	W 194	261	320
Weight	kg / lb 42 / 93	53 / 117	66 / 146

<sup>1</sup> Temperatures as low as ambient +10 °C can be selected – requires open damper and no additional heat in unit. <sup>2</sup> Depth does not include handle/display (65mm / 2.6 in.) and distance spacer at rear (80mm / 3.1 in.); height includes the feet (35mm / 1.4 in.) NOTE: All figures in all tables are typical average values for series devices, based on factory standard following norm DIN12880. Please contact us for certification information or IQ/OQ documents.documents.

## 180° door opening

Allows convenient access to the interior for hassle free cleaning and easy loading of samples.



Standard RS232 interface on all units

Fresh air damper provides control over air exchanges



Operating up to 250 °C



## performance for proven results

- Operating from 50 °C up to 250 °C
- Gravity convection units are designed to protect delicate samples while offering temperature uniformity of +/- 3.5 °C with temperature stability of +/- 0.4 °C at 150 °C
- Mechanical convection models provide a temperature uniformity of +/-2.9 °C with temperature stability of +/-0.3 °C at 150 °C

## data logging

- The exhaust vent can be used as an access port for an external temperature sensor
- All Heratherm ovens come standard with a RS232 data interface
- Optional factory installed access ports available

### Specifications table/order numbers General Protocol Ovens

Order number	51028121	51028873	51028875
Model	OMS60	OMS100	OMS180
Convection technology	Mechanical convection	Mechanical convection	Mechanical convection
Temperature range	°C 50 °C <sup>1</sup> - 250 °C	50 °C <sup>1</sup> - 250 °C	50 °C <sup>1</sup> - 250 °C
Spatial temperature deviation	at 150 °C ± 3.3 °C	± 3.5 °C	± 2.8 °C
Temperature deviation over time	at 150 °C ± 0.3 °C	± 0.4 °C	± 0.3 °C
Footprint	m <sup>2</sup> / sqft 0.3 / 3.2	0.36 / 3.9	0.47 / 5.1
Chamber volume	L / cuft 66 / 2.3	104 / 3.65	179 / 6.3
Dimensions	chamber, mm / in (W x H x D) 354 x 508 x 368 / 13.9 x 20 x 14.5	464 x 608 x 368 / 18.3 x 23.9 x 14.5	464 x 708 x 543 / 18.3 x 27.9 x 21.4
	exterior <sup>2</sup> , mm / in (W x H x D) 530 x 755 x 565 / 20.9 x 29.7 x 22.2	640 x 855 x 565 / 25.2 x 33.7 x 22.2	640 x 955 x 738 / 25.2 x 37.6 x 29.1
Number of shelves	supplied / positions 2 / 13	2 / 16	2 / 19
Max. shelf load	kg / lb 25 / 55	25 / 55	25 / 55
Rated voltage / frequency	V / Hz 120 / 60	120 / 60	120 / 60
Rated power / max. current	W / A 1440 / 12	1660 / 13.8	1660 / 13.8
Energy consumption at 150° C	W 316	410	465
Weight	kg / lb 42 / 93	53 / 117	66 / 146

<sup>1</sup> Temperatures as low as ambient +10 °C can be selected – requires open damper and no additional heat in unit. <sup>2</sup> Depth does not include handle/display (65mm / 2.6 in.) and distance spacer at rear (80mm / 3.1 in.); height includes the feet (35mm / 1.4 in.) NOTE: All figures in all tables are typical average values for series devices, based on factory standard following norm DIN12880. Please contact us for certification information or IQ/OQ documents.

# Thermo Scientific Heratherm Advanced Protocol Ovens

As well as incorporating all the benefits of our General Protocol table top ovens, the Advanced Protocol range boasts additional features providing even more flexibility and accuracy.



100 L model shown

## maximum efficiency

- Timer extends the automation options available to the user
  - > Automate the oven to turn on or off at pre-set times
  - > Weekly function allows to set on / off times for each day of the week individually
  - > Real time function allows to set timer based on actual time in hours and minutes
  - > Timer is perfect to save energy by running the oven just at needed time

## ultimate performance

- Capable of operating at temperatures up to 330 °C
- Our highest level of temperature uniformity
- Exceptionally low energy consumption – 60 L models need just 170 W (gravity convection) and 275 W (mechanical convection) per hour to maintain 150 °C

### Specifications table/order numbers Advanced Protocol Ovens

Order number (coated exterior)	51028142	51028143	51028144
Model	OGH60	OGH100	OGH180
Convection technology	Gravity convection	Gravity convection	Gravity convection
Temperature range	°C 50 °C <sup>1</sup> - 330 °C	50 °C <sup>1</sup> - 330 °C	50 °C <sup>1</sup> - 330 °C
Spatial temperature deviation	at 150 °C ± 2.5 °C	± 3.0 °C	± 2.5 °C
Temperature deviation over time	at 150 °C ± 0.3 °C	± 0.3 °C	± 0.3 °C
Footprint	m <sup>2</sup> / sqft 0.3 / 3.2	0.36 / 3.9	0.47 / 5.1
Chamber volume	L / cuft 61 / 2.15	99 / 3.6	168 / 6.05
Dimensions	chamber, mm / in (W x H x D) 328 x 480 x 389 / 12.9 x 18.9 x 15.3	438 x 580 x 389 / 17.2 x 22.8 x 15.3	438 x 680 x 564 / 17.2 x 26.8 x 22.2
	exterior <sup>2</sup> , mm / in (W x H x D) 530 x 755 x 565 / 20.9 x 29.7 x 22.2	640 x 855 x 565 / 25.2 x 33.7 x 22.2	640 x 955 x 738 / 25.2 x 37.6 x 29.1
Number of shelves	supplied / positions 2 / 13	2 / 16	2 / 19
Max. shelf load	kg / lb 25 / 55	25 / 55	25 / 55
Rated voltage / frequency	V / Hz 120 / 60	208-240 / 60	208-240 / 60
Rated power / max. current	W / A 1730 / 14.4	3360 / 14	3360 / 14
Energy consumption at 150° C	W 170	210	290
Weight	kg / lb 44 / 97	55 / 121	69 / 152



Fan adjustable in five speed settings for matching the airflow to your application

Dedicated access port (0.71 in diameter) allows the introduction of independent sensors



Operating temperatures as high as 330 °C

## unmatched sophistication

- Adjustable fan speed for application related airflow
  - > High speed for fastest drying/heating, quick recovery as well as best temperature stability/uniformity
  - > Reduced speed for applications that require minimal airflow, like drying of paper, food or pharmaceutical samples
  - > Fan speed is adjustable in 5 settings; note: actual speed will vary by temperature, and fan cannot be switched off – to prevent overheating
- Programmable controller for temperature ramps and dwells
  - > Store up to 10 programs with 10 discrete steps
  - > Features electronically controlled fan speed and damper position
- Access port allows the introduction of sensors for independent data monitoring
- A simple calibration routine ensures temperature accuracy over time
- Boost function enables rapid heating up – no need to run the oven 24/7

### Specifications table/order numbers Advanced Protocol Ovens

Order number (coated exterior)	51028124	51028125	51028126
Model	OMH60	OMH100	OMH180
Convection technology	Mechanical convection	Mechanical convection	Mechanical convection
Temperature range	°C 50 °C <sup>1</sup> - 330 °C	50 °C <sup>1</sup> - 330 °C	50 °C <sup>1</sup> - 330 °C
Spatial temperature deviation	at 150 °C ± 1.5 °C	± 1.3 °C	± 1.5 °C
Temperature deviation over time	at 150 °C ± 0.2 °C	± 0.2 °C	± 0.2 °C
Footprint	m <sup>2</sup> / sqft 0.3 / 3.2	0.36 / 3.9	0.47 / 5.1
Chamber volume	L / cuft 62 / 2.2	97 / 3.5	170 / 6.1
Dimensions	chamber, mm / in (W x H x D) 354 x 508 x 343 / 13.9 x 20 x 13.5	464 x 608 x 343 / 18.3 x 23.9 x 13.5	464 x 708 x 518 / 18.3 x 27.9 x 20.4
	exterior <sup>2</sup> , mm / in (W x H x D) 530 x 755 x 565 / 20.9 x 29.7 x 22.2	640 x 855 x 565 / 25.2 x 33.7 x 22.2	640 x 955 x 738 / 25.2 x 37.6 x 29.1
Number of shelves	supplied / positions 2 / 13	2 / 16	2 / 19
Max. shelf load	kg / lb 25 / 55	25 / 55	25 / 55
Rated voltage / frequency	V / Hz 120 / 60	208-240 / 60	208-240 / 60
Rated power / max. current	W / A 1440 / 12	3360 / 14	3360 / 14
Energy consumption at 150° C	W 275	389	448
Weight	kg / lb 44 / 97	55 / 121	69 / 152

<sup>1</sup> Temperatures as low as ambient +10 °C can be selected – requires open damper and no additional heat in unit. <sup>2</sup> Depth does not include handle/display (65mm / 2.6 in.) and distance spacer at rear (80mm / 3.1 in.); height includes the feet (35mm / 1.4 in.) NOTE: All figures in all tables are typical average values for series devices, based on factory standard following norm DIN12880. Please contact us for certification information or IQ/OQ documents.

# Thermo Scientific Heratherm Advanced Protocol Security Ovens

Our Advanced Protocol Security table top portfolio combines the benefits of our advanced protocol line with an extra layer of security for applications where process reliability and sample protection are paramount.



All Heratherm Advanced Protocol Security ovens are available in coated or stainless steel exterior. (model 100 L shown)

enhanced  
safety

### Additional security features provide peace-of-mind for precious samples

- Auto-dry function deactivates oven when the samples are dry, saving energy (Note: An optional sample temperature sensor is required to utilize this feature)
- Standard overtemperature alarm and an additional undertemperature alarm ensure that your samples are kept at the correct temperature
- Door lock prevents disruption, tampering or accidental opening
- Door alarm notifies the operator when door is left open accidentally
- Socket for independent sample sensor (option): When connected, exact sample temperature is shown on display for additional peace-of-mind

### Specifications table/order numbers Advanced Protocol Security Ovens

Order number (coated exterior)	51028118	51028119	51028120
Model	OGH60-S	OGH100-S	OGH180-S
Order number (stainless steel exterior)	51028536	51028537	51028538
Model	OGH60-S SS <sup>1</sup>	OGH100-S SS <sup>1</sup>	OGH180-S SS <sup>1</sup>
Convection technology	Gravity convection	Gravity convection	Gravity convection
Temperature range	°C 50 °C <sup>2</sup> - 330 °C	50 °C <sup>2</sup> - 330 °C	50 °C <sup>2</sup> - 330 °C
Spatial temperature deviation	at 150 °C ± 2.5 °C	± 2.5 °C	± 2.9 °C
Temperature deviation over time	at 150 °C ± 0.3 °C	± 0.3 °C	± 0.3 °C
Footprint	m <sup>2</sup> / sqft 0.3 / 3.2	0.36 / 3.9	0.47 / 5.1
Chamber volume	L / cuft 61 / 2.15	99 / 3.6	168 / 6.05
Dimensions	chamber, mm / in (W x H x D) 328 x 480 x 389 / 12.9 x 18.9 x 15.3	438 x 580 x 389 / 17.2 x 22.8 x 15.3	438 x 680 x 564 / 17.2 x 26.8 x 22.2
	exterior <sup>3</sup> , mm / in (W x H x D) 530 x 755 x 565 / 29.7 x 28.3 x 22.2	640 x 855 x 565 / 25.2 x 33.7 x 22.2	640 x 955 x 738 / 25.2 x 37.6 x 29.1
Number of shelves	supplied / positions 2 / 13	2 / 16	2 / 19
Max. shelf load	kg / lb 25 / 55	25 / 55	25 / 55
Rated voltage / frequency	V / Hz 120 / 60	208-240 / 60	208-240 / 60
Rated power / max. current	W / A 1730 / 14.4	3360 / 14	3360 / 14
Energy consumption at 150° C	W 170	210	290
Weight	kg / lb 44 / 97	55 / 121	69 / 152

<sup>1</sup> Stainless Steel. <sup>2</sup> Temperatures as low as ambient +10 °C can be selected – requires open damper and no additional heat in unit. <sup>3</sup> Depth does not include handle/display (65mm / 2.6 in.) and distance spacer at rear (80mm / 3.1 in.); height includes the feet (35mm / 1.4 in.) NOTE: All figures in all tables are typical average values for series devices, based on factory standard following norm DIN12880. Please contact us for certification information or IQ/OQ documents.



An audible door alarm notifies the operator when the door is left open

## Unique optional sample sensor

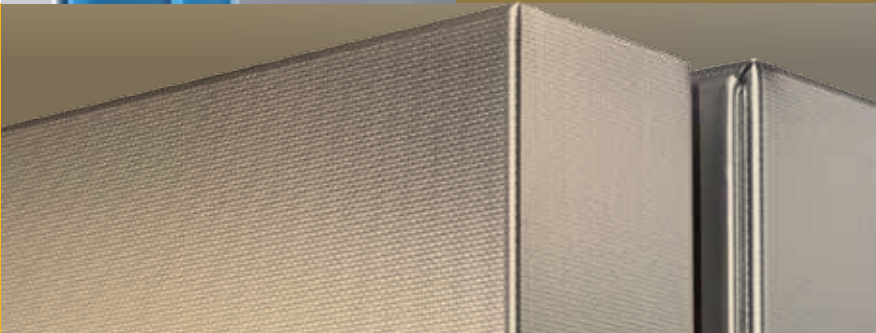
- Measure exact sample temperature: shown on display in addition to chamber temperature
- When used with “auto dry” program, the oven will switch off automatically as soon as sample is dry to save energy!



Lockable door restricts access

## Optional stainless steel exterior

- Robust and corrosion-resistant surface
- Easy-to-clean
- Meets demanding needs in pharmaceutical and clinical laboratories



Stainless steel exterior meets demanding needs in pharmaceutical and clinical laboratories

### Specifications table/order numbers Advanced Protocol Security Ovens

Order number (coated exterior)	51028127	51028128	51028129
Model	OMH60-S	OMH100-S	OMH180-S
Order number (stainless steel exterior)	51028539	51028326	51028540
Model	OMH60-S SS <sup>1</sup>	OMH100-S SS <sup>1</sup>	OMH180-S SS <sup>1</sup>
Convection technology	Mechanical convection	Mechanical convection	Mechanical convection
Temperature range	°C 50 °C <sup>2</sup> - 330 °C	50 °C <sup>2</sup> - 330 °C	50 °C <sup>2</sup> - 330 °C
Spatial temperature deviation	at 150 °C ± 1.5 °C	± 1.3 °C	± 1.5 °C
Temperature deviation over time	at 150 °C ± 0.2 °C	± 0.2 °C	± 0.2 °C
Footprint	m <sup>2</sup> / sqft 0.3 / 3.2	0.36 / 3.9	0.47 / 5.1
Chamber volume	L / cuft 62 / 2.2	97 / 3.5	170 / 6.1
Dimensions	chamber, mm / in (W x H x D) 354 x 508 x 343 / 13.9 x 20 x 13.5	464 x 608 x 343 / 18.3 x 23.9 x 13.5	464 x 708 x 518 / 18.3 x 27.9 x 20.4
	exterior <sup>3</sup> , mm / in (W x H x D) 530 x 755 x 565 / 20.9 x 29.7 x 22.2	640 x 855 x 565 / 25.2 x 33.7 x 22.2	640 x 955 x 738 / 25.2 x 37.6 x 29.1
Number of shelves	supplied / positions 2 / 13	2 / 16	2 / 19
Max. shelf load	kg / lb 25 / 55	25 / 55	25 / 55
Rated voltage / frequency	V / Hz 120 / 60	208-240 / 60	208-240 / 60
Rated power / max. current	W / A 1440 / 12	3360 / 14	3360 / 14
Energy consumption at 150° C	W 275	389	448
Weight	kg / lb 44 / 97	55 / 121	69 / 152

<sup>1</sup> Stainless Steel. <sup>2</sup> Temperatures as low as ambient +10 °C can be selected – requires open damper and no additional heat in unit. <sup>3</sup> Depth does not include handle/display (65mm / 2.6 in.) and distance spacer at rear (80mm / 3.1 in.); height includes the feet (35mm / 1.4 in.) NOTE: All figures in all tables are typical average values for series devices, based on factory standard following norm DIN12880. Please contact us for certification information or IQ/OQ documents.

# Thermo Scientific Heratherm Large Capacity General Protocol Ovens

Heratherm large capacity ovens have been designed with your need for larger samples or high sample volume in mind. The General Protocol ovens provide high capacity for day-to-day drying and heating applications.



Heratherm large capacity ovens are available as 400 L and 750 L units

## 400 L

## 750 L

### efficiency

- Two sizes (400 L and 750 L)
- Gravity convection technology for gentle heating and drying
- Low overall energy consumption: 23% energy savings compared to conventional ovens\*
- Great footprint/volume ratio and optimal use of chamber with flexible shelving system
- Corrosion-resistant stainless steel inner chambers (AISI 430)

### exceptional performance

- Operating from 10 °C above ambient temperature up to 250 °C
- Protect delicate samples while still offering a uniformity of +/- 3.0 °C and temperature stability of +/- 0.5 °C at 150 °C

### ease of use

- „Plug and play” for 208/240V models with standard Nema 6-20P plug: no special hard-wiring necessary
- Intuitive user interface and easy-to-read display
- Lockable casters for mobility and easy set-up in your lab





Easy-to-view, vacuum fluorescent display with simple-to-use touch button operation

Heratherm large capacity ovens offer up to 23% energy savings compared to conventional ovens\*



Factory installed casters allow for increased mobility and make setting up your lab easy



\* based on internal testing 04/2012

maximum  
convenience for  
maximum safety

- Large, easy-to-view, vacuum fluorescent display with simple-to-use touch button operation controlled by an onboard microprocessor
- Doors can be opened to 180° angle for ease-of-access
- Easy-to-remove shelves for cleaning
- Automatic overtemperature alarm system to protect samples – no need for timely manual setting
- Timer function to program start or switch off times for additional energy savings
- Lockable casters for easy mobility and stability

Specifications table/order numbers Large Capacity General Protocol Ovens

Order number		51029328	51029340
Model		OGS400	OGS750
Convection technology		gravity convection	gravity convection
Temperature range	°C	+50 °C <sup>1</sup> - 250 °C	+50 °C <sup>1</sup> - 250 °C
Spatial temperature deviation	at 150 °C	±3.0 °C	±3.7 °C
Temperature deviation over time	at 150 °C	±0.5 °C	±0.5 °C
Footprint	m <sup>2</sup> / sqft	0.56 / 6.0	0.91 / 9.8
Chamber volume	L / cuft	419 / 14.8	774 / 27.3
Dimensions	chamber mm / in (W x H x D)	544 x 1307 x 590 / 21.4 x 51.5 x 23.2	1060 x 1335 x 590 / 39.5 x 51.5 x 23.2
	exterior <sup>2</sup> mm / in (W x H x D)	778 x 1653 x 770 / 30.6 x 66 x 30.3	1261 x 1653 x 770 / 49.6 x 66 x 30.3
Number of shelves	supplied / positions	2 / 39	2 / 39
Max. shelf load	kg / lb	40 / 88	40 / 88
Rated voltage / frequency	V / Hz	208-240 / 60	208-240 / 60
Rated power / max. current	W / A	2640 / 11	3240 / 13.5
Energy consumption at 150° C	W	520	800
Weight	kg / lb	136 / 300	182 / 401

<sup>1</sup> Temperatures as low as ambient +10 °C can be selected – requires open damper and no additional heat in unit  
<sup>2</sup> Depth does not include handle/display (65mm / 2.6 in.) and distance spacer at rear (106mm / 4.2 in.); height includes the casters (108mm / 4.3 in.)

NOTE: All figures in all tables are typical average values for series devices, based on factory standard following norm DIN12880. Please contact us for certification information or IQ/OQ documents.

# Thermo Scientific Heratherm Large Capacity Advanced Protocol Ovens

The Heratherm Advanced Protocol ovens offer mechanical convection technology for faster drying and better temperature stability and uniformity. Greater flexibility, accuracy and dependability are provided through a wide range of additional features.



prime  
performance

- Operating at temperatures as high as 250 °C
- Improved level of temperature uniformity:  $\pm 2.1$  to 3.1 °K
- Mechanical convection technology ensures optimal temperature distribution, and fast heat-up and drying processes.
- 2-speed fan for application flexibility:
  - > Slow speed for applications that require minimal airflow (e.g. drying of powders),
  - > high speed for fastest drying and heating, and best temperature stability and uniformity



Advanced protocol units available in stainless steel exterior



Fan adjustable in two speeds for matching the airflow to your application

### Additional features

- Access port for introduction of external sensors for independent data monitoring, or other devices for specific test set-ups
- Simple calibration routine to ensure temperature compliance over time.



greater efficiency

- Programmable controller for pre-defined temperature ramps
  - > Up to 10 temperature steps can be defined per program
  - > Fan speed and damper position are controlled electronically, and can be changed for every program step individually for maximal process flexibility
  - > Up to 10 programs can be saved for simple and speedy process repetition
- Sophisticated timer extends the automation options available to the user
  - > Choose between a simple on/off timer, recurring weekly timer or set oven activity based on the 24 hour clock
- Inner chamber made from stainless steel (highly resistant quality AISI 304)

### Specifications table/order numbers Large Capacity Advanced Protocol Ovens

Order number (coated exterior)	51029331	51029345
Model	OMH400	OMH750
Order number (stainless steel exterior)	51029332	51029346
Model	OMH400-SS	OMH750-SS
Convection technology	mechanical convection	mechanical convection
Temperature range	+50 °C <sup>1</sup> - 250 °C	+50 °C <sup>1</sup> - 250 °C <sup>2</sup>
Spatial temperature deviation at 150 °C	±2.1 °C	±3.1 °C
Temperature deviation over time at 150 °C	±0.3 °C	±0.4 °C
Footprint	m <sup>2</sup> / sqft	0.56 / 6.0
Chamber volume	L / cuft	396 / 14
Dimensions	chamber mm / in (W x H x D)	1004 x 1335 x 545 / 39.5 x 52.5 x 21.5
	exterior <sup>3</sup> mm / in (W x H x D)	1261 x 1653 x 770 / 49.6 x 66 x 30.3
Number of shelves	supplied / positions	2 / 39
Max. shelf load	kg / lb	40 / 88
Rated voltage / frequency	V / Hz	208-240 / 60
Rated power / max. current	W / A	3480 / 14.5
Energy consumption at 150° C	W	990
Weight	kg / lb	185 / 408

<sup>1</sup> Temperatures as low as ambient +10 °C can be selected – requires open damper and no additional heat in unit  
<sup>2</sup> With low voltage and open damper max temperature is 235 °C <sup>3</sup> Depth does not include handle/display (65mm / 2.6 in.) and distance spacer at rear (106mm / 4.2 in.); height includes the casters (108mm / 4.3 in.)

NOTE: All figures in all tables are typical average values for series devices, based on factory standard following norm Din12880. Please contact us for certification information or IQ/OQ documents.

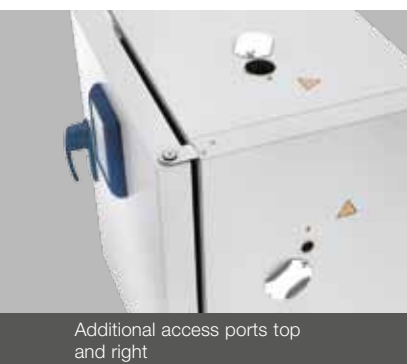
# Factory installed options – for table top ovens

Specifications table/order numbers

DESCRIPTION	ORDER NUMBER	DETAILS
<b>Options – factory installed: please order in conjunction with desired oven</b>		
General Protocol kit for underbench installation	50128887	Kit for underbench installation; for all General Protocol ovens; consists of exhaust tubing (59 in length) and details on wall distances. Note: This kit can be ordered separate from oven
Advanced Protocol kit for underbench installation	51901061	Kit for underbench installation; for all table top Advanced Protocol and Advanced Protocol Security ovens; consists of exhaust tubing (59 in length) and details on wall distances; maximum temperature of oven is set at 250 °C for underbench installation.
Access port left, small	51900996	Additional access port on center of left side of unit; Ø 0.9 in for all mechanical convection ovens / Ø 0.75 in for all gravity convection ovens.
Access port left, large	51900997	Additional access port on center of left side of unit; Ø 2.3 in for all mechanical convection ovens / Ø 2.0 in for all gravity convection ovens.
Access port right, small	51900998	Additional access port on center of right side of unit; Ø 0.9 in for all mechanical convection ovens / Ø 0.75 in for all gravity convection ovens.
Access port right, large	51900999	Additional access port on center of right side of unit; Ø 2.3 in for all mechanical convection ovens / Ø 2.0 in for all gravity convection ovens.
Access port top, small	51901000	Additional access port on center of top of unit; Ø 0.9 in for all ovens.
Access port top, large	51901001	Additional access port on center of top of unit; Ø 2.3 in for all ovens.
Door hinge left side	51900993	Door hinge on left side – available for all table top units. Coated exterior only.
<b>Ovens with view package* – coated exterior (stainless steel exterior not available for this option)</b>		
OGH60 with view package	51028928	Advanced Protocol oven with gravity convection; 61 liters volume; 120V; 60Hz; 1 window; light
OGH100 with view package	51028929	Advanced Protocol oven with gravity convection; 99 liters volume; 208-240V; 60Hz; 1 window, light
OGH180 with view package	51028930	Advanced Protocol oven with gravity convection; 168 liters volume; 208-240V; 60Hz; 2 windows, light
OMH60 with view package	51028265	Advanced Protocol oven with mechanical convection; 62 liters volume; 120V; 60Hz; 1 window; light
OMH100 with view package	51028931	Advanced Protocol oven with mechanical convection; 97 liters volume; 208-240V; 60Hz; 1 window, light
OMH180 with view package	51028932	Advanced Protocol oven with mechanical convection; 170 l volume; 208-240V; 60Hz; 2 windows, light
OGH60-S with view package	51028268	Advanced Protocol Security oven with gravity convection; 61 l volume; 120V; 60Hz; 1 window; light
OGH100-S with view package	51028933	Advanced Protocol Security oven with gravity convection; 99 l volume; 208-240V; 60Hz; 1 window, light
OGH180-S with view package	51028934	Advanced Protocol Security oven with gravity convection; 168 l volume; 208-240V; 60Hz; 2 windows, light
OMH60-S with view package	51028267	Advanced Protocol Security oven with mechanical convection; 62 l vol.; 120V; 60Hz; 1 window; light
OMH100-S with view package	51028269	Advanced Protocol Security oven with mechanical convection; 97 l vol.; 208-240V; 60Hz; 1 window, light
OMH180-S with view package	51028270	Advanced Protocol Security oven with mechanical convection; 170 l vol.; 208-240V; 60Hz; 2 windows, light

\*maximum temperature for ovens with view package is 250 °C

Please ask for our custom solutions. We provide Heratherm table top ovens for cable testing applications, clean room applications, and inner casing with conditional gas-tightness for inert gas applications. Additionally, access ports can be provided for large capacity ovens at preferred positions.



Additional access ports top and right



Underbench installation kit



Viewing windows in 180L unit



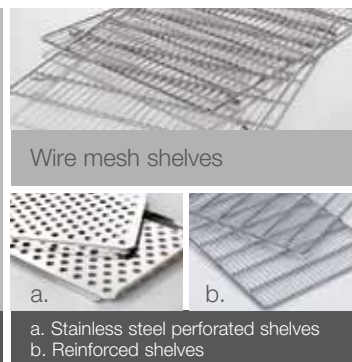
Viewing window in 100L unit



# Accessories

Specifications table/order numbers

DESCRIPTION	ORDER NUMBER	DETAILS
<b>Additional shelving – gravity convection</b>		
Additional wire mesh shelf, 60 L models	50127761	For General Protocol; Advanced Protocol; Advanced Protocol Security ovens; incl. 2 shelf supports; 12.28 x 15.20 in
Additional wire mesh shelf, 100 L models	50127762	For General Protocol; Advanced Protocol; Advanced Protocol Security ovens; incl. 2 shelf supports; 16.61 x 15.20 in
Additional wire mesh shelf, 180 L models	50127763	For General Protocol; Advanced Protocol; Advanced Protocol Security ovens; incl. 2 shelf supports; 16.61 x 22.07 in
Additional wire mesh shelf, 400 L models	50135245	For General Protocol ovens; incl. 2 shelf supports; 20.79 x 21.06 in
Additional wire mesh shelf, 750 L models	50135246	For General Protocol ovens; incl. 2 shelf supports; 38.74 x 21.06 in
Reinforced shelf, 180 L models	50128880	Shelf with maximum capacity of 154 lb for 180 L models, gravity convection of Advanced Protocol and Advanced Protocol Security ovens; max total capacity is 551 lb
Stainless steel perforated shelf, 400 L models	50135241	For General Protocol oven; incl. 2 shelf supports; 20.8 x 19.6 in
Stainless steel perforated shelf, 750 L models	50135242	For General Protocol oven; incl. 2 shelf supports; 38.7 x 19.6 in
<b>Additional shelving – mechanical convection</b>		
Additional wire mesh shelf, 60 L models	50127764	For General Protocol; Advanced Protocol; Advanced Protocol Security ovens; incl. 2 shelf supports; 13.31 x 13.22 in
Additional wire mesh shelf, 100 L models	50127765	For General Protocol; Advanced Protocol; Advanced Protocol Security ovens; incl. 2 shelf supports; 17.64 x 13.22 in
Additional wire mesh shelf, 180 L models	50127766	For General Protocol; Advanced Protocol; Advanced Protocol Security ovens; incl. 2 shelf supports; 17.64 x 20.12 in
Additional wire mesh shelf, 400 L models	50135245	For Advanced Protocol ovens; incl. 2 shelf supports; 20.79 x 21.06 in
Additional wire mesh shelf, 750 L models	50135246	For Advanced Protocol ovens; incl. 2 shelf supports; 38.74 x 21.06 in
Stainless steel perforated shelf, 60 L models	50127773	For General Protocol, Advanced Protocol, Advanced Protocol Security ovens; incl. 2 shelf supports; 12.95 x 14.80 in
Stainless steel perforated shelf, 100 L models	50127774	For General Protocol, Advanced Protocol, Advanced Protocol Security ovens; incl. 2 shelf supports; 17.28 x 14.80 in
Stainless steel perforated shelf, 180 L models	50127777	For General Protocol, Advanced Protocol, Advanced Protocol Security ovens; incl. 2 shelf supports; 17.28 x 19.88 in
Reinforced shelf, 180 L models	50128881	Shelf with maximum capacity of 154 lb for 180 L models, mechanical convection of Advanced Protocol and Advanced Protocol Security ovens; max total capacity is 551 lb
Stainless steel perforated shelf, 400L models	50135241	Stainless steel perforated shelf for Advanced Protocol oven; incl. 2 shelf supports; 20.8 x 19.6 in
Stainless steel perforated shelf, 750L models	50135242	Stainless steel perforated shelf for Advanced Protocol oven; incl. 2 shelf supports; 38.7 x 19.6 in
<b>Sample Sensor</b>		
Sample sensor, for select models	50127767	Sample sensor for connection to Advanced Protocol Security table top ovens (60 L, 100 L, 180 L); large capacity Advanced Protocol large capacity ovens (400 L, 750 L); measures exact sample temperature; sample temperature is shown on display as plugged in; cable length: 86.61 in
<b>Silicone free viton door sealing</b>		
Silicone free viton door sealing, 60 L models	50130657	Silicone free viton door sealing for all 60 L ovens
Silicone free viton door sealing, 100 L models	50130658	Silicone free viton door sealing for all 100 L ovens
Silicone free viton door sealing, 180 L models	50130659	Silicone free viton door sealing for all 180 L ovens
Silicone free viton door sealing, 400 L models	50135869	Silicone free viton door sealing for all 400 L ovens
Note: there is no silicone-free solution available for the 750L units.		
<b>Fresh air filter</b>		
Fresh air particle filter, all ovens models	50127566	Fresh air particle filter for connection to the fresh air vent (intake); for all ovens models
<b>Stacking kits</b>		
Stacking kit, all 60 L models	50126665	Stacking kit to stack two 60 L models
Stacking kit, all 100 L models	50126666	Stacking kit to stack two 100 L models, or 60 L on 100 L
Stacking kit, all 180 L models	50126667	Stacking kit to stack two 100 L models, or 60 L /100 L on 180 L
<b>Support Stands</b>		
Support stand, all 60 L models	50127741	Support stand with casters for 60 L models; height including casters: 7.36 in
Support stand, all 100 L models	50127742	Support stand with casters for 100 L models; height including casters: 7.36 in
Support stand, all 180 L models	50127743	Support stand with casters for 180 L models; height including casters: 7.36 in



# Thermo Scientific Heratherm Heating and Drying Ovens

## Thermo Scientific Smart-Vue Wireless Monitoring Solution

Smart. Scalable. Simple.

Continuously monitors sample environment temperature up to +350 °C

- Secure data logging with real-time alarms
- Audit trail traceability to assist with conformance to 21 CFR Part 11

To learn more, visit

[www.thermoscientific.com/smart-vue](http://www.thermoscientific.com/smart-vue)

Solutions vary by RF regions worldwide and are compatible with multiple brands and types of laboratory equipment. Contact your local sales representative for more details.



Rear view of the 100 L Advanced Protocol oven with Smart-Vue



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