# Efficient, flexible, and easy

Heratherm Heating and Drying Ovens

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## Each laboratory heating and drying oven is designed with sample protection as top priority

**Thermo Scientific™ Heratherm™ Ovens are available in two different models. Choose gravity or mechanical convection technology**

• Thermo Scientific™ Heratherm™ General Protocol units are optimally suited to everyday heating and drying applications up to 250 °C

• Thermo Scientific™ Heratherm™ Advanced Protocol models provide the necessary technologies for users requiring accuracy and increased heating capability 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.

# Safe, easy, efficient
## Discover why laboratories across the globe rely on Thermo Scientific products every day

**Energy efficient**

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

From easy drying of glassware to 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.*

- Helps improve 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 enables optimal space utilization

- Smart safety system surveys funtionality of oven consistently

- Temperature uniformity as good as +/-1.3°C at 150°C

- Automatic audible and visual over-temperature alarm

- Access port for data logging with independent sensors

- Low external surface temperature for easy handling

- Easy-to-read, large vacuum fluorescent display

- Easy setting with intuitive interface

- Easy cleaning with rounded corners

* Subject to Thermo Fisher Scientific Standard Limited Warranty. See www.thermoscientific.com or product literature for details.

**Based on internal testing 10/2010

# Innovative technology for outstanding versatility

| Heratherm features | General protocol ovens | | Advanced protocol ovens | |
|---|---|---|---|---|
| | Table top | Large capacity | Table top | Large capacity |
| Temperature range | 50 °C[1] - 250 °C | 50 °C[1] - 250 °C | 50 °C[1] - 330 °C S | 50 °C[1] - 250 °C |
| Interior material | stainless steel AISI 430 | 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 | • |
| Mechanical convection | choice | • | choice | ✓ |
| Timer functions | on / off | on / off | choice of weekly/ hourly/ real time[2] | choice of weekly/ hourly/ real time[2] |
| Fresh air damper | manually controlled | manually controlled | electronically controlled | electronically controlled |
| Access port for independent data monitoring | use exhaust vent | use exhaust vent | ✓ | ✓ |
| RS232 interface | ✓ | ✓ | ✓ | ✓ |
| Adjustable fan speed | • | • | 5 speeds[3] | 2 speeds[3] |
| Programmable (ramps / dwells) | • | • | ✓ | ✓ |
| Boost function for accelerated heat-up | • | • | ✓ | • |
| Dry alarm contact for connection of alarm device | • | • | ✓ | ✓ |
| Door alarm | • | • | • | ✓ |

[1] Temperatures as low as ambient +10 °C can be selected – requires open damper and no additional heat in unit. [2] for details on timer see page 8. [3] 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
- Exceptional temperature uniformity
- Fast temperature recovery after door opening

### 02
**Gravity convection**
- Gentle drying and heating with low air turbulences
- Excellent for working with materials that are sensitive to airflow such as powders and foils

# Select the right model for your needs

| 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. Check also our Thermo Scientific vacuum ovens for speedy drying at low temperatures www.thermoscientific.com/everylab. |
| | Powders | Temperatures between 30°C and 70°C | |
| | Paper, textile | Temperature around 37°C | |
| | Soil, sand | Temperature around 37°C | |
| | Electronics | Temperatures of 37°C to around 50°C | |
| | Pharmaceutical preparations | Temperature around 37°C | |
| Material testing | Cables | Highest temperature accuracy; safe processes | Advanced Protocol models with programming capabilities – mechanical convection models have highest temperature accuracy. |
| | Plastics | Highest temperature accuracy; safe processes | |
| Curing | Paint | Gentle heating | Gravity convection for gentle heating. Choose Advanced Protocol for high temperature accuracy. |
| | Adhesives | Gentle heating | |
| | Plastics | Gentle heating | |
| | Metals | Gentle heating | Gravity convection for gentle heating, or Advanced Protocol mechanical convection at low fan speed. |
| Heated storage | Pills, drugs | Gentle heating; safe processes | |
| Vulcanization | Rubber | Gentle heating | |

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

## 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

*examples **based on competitors' published specifications

## 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.

# Heratherm General Protocol Ovens
## Excellent for routine daily work, and heating and drying samples

**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



Heratherm General Protocol Ovens, 60 L, 100 L, 180 L models

**Specifications table/order numbers General Protocol Ovens**

| Order numbers | 51028112 | 51028872 | 51028874 |
|---|---|---|---|
| Model | OGS60 | OGS100 | OGS180 |
| Convection technology | Gravity convection | Gravity convection | Gravity convection |
| Temperature range (°C) | 50 °C[1] - 250 °C | 50 °C[1] - 250 °C | 50 °C[1] - 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 (m² / 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 |
| Interior dimensions (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 dimensions[2] (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 (standard / max) | 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 |
| Weight (kg / lb) | 42 / 93 | 53 / 117 | 66 / 146 |
| Energy consumption at 150° C (W) | 194 | 261 | 320 |

[1] Temperatures as low as ambient +10 °C can be selected – requires open damper and no additional heat in unit. [2] Depth does not include handle/display (65 mm / 2.6 in.) and distance spacer at rear (80 mm / 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.



Smooth inner chamber with easy to clean rounded corners

# Performance for proven results

## Features

- 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

Standard RS232 interface on all units

## Specifications table/order numbers General Protocol Ovens

| Order numbers | 51028121 | 51028873 | 51028875 |
|---|---|---|---|
| Model | OMS60 | OMS100 | OMS180 |
| Convection technology | Mechanical convection | Mechanical convection | Mechanical convection |
| Temperature range (°C) | 50 °C[1] - 250 °C | 50 °C[1] - 250 °C | 50 °C[1] - 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 (m² / 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 |
| Interior dimensions (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 |
| Exterior² dimensions (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 (standard / max) | 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 |
| Weight (kg / lb) | 42 / 93 | 53 / 117 | 66 / 146 |
| Energy consumption at 150° C (W) | 316 | 410 | 465 |

[1] Temperatures as low as ambient +10 °C can be selected – requires open damper and no additional heat in unit. ²Depth 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.



Fresh air damper provides control over air exchanges



Operating up to 250 °C

# 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

**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

100 L model shown

**Specifications table/order numbers Advanced Protocol Ovens**

| Order numbers (coated exterior) | 51028115 | 51028116 | 51028117 |
|---|---|---|---|
| Model | OGH60 | OGH100 | OGH180 |
| Convection technology | Gravity convection | Gravity convection | Gravity convection |
| Temperature range (°C) | 50 °C[1] - 330 °C | 50 °C[1] - 330 °C | 50 °C[1] - 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 (m² / 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 |
| Interior dimensions (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 dimensions² (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 (standard / max) | 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 |
| Weight (kg / lb) | 44 / 97 | 55 / 121 | 69 / 152 |
| Energy consumption at 150°C (W) | 170 | 210 | 290 |

[1] Temperatures as low as ambient +10 °C can be selected – requires open damper and no additional heat in unit. ² Depth does not include handle/display (65 mm / 2.6 in.) and distance spacer at rear (80 mm / 3.1 in.); height includes the feet (35 mm / 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.

# Additional features

- 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 phamaceutical 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



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

**Specifications table/order numbers Advanced Protocol Ovens**

| Order numbers (coated exterior) | 51028124 | 51028125 | 51028126 |
|---|---|---|---|
| Model | OMH60 | OMH100 | OMH180 |
| Convection technology | Mechanical convection | Mechanical convection | Mechanical convection |
| Temperature range (°C) | 50 °C[1] - 330 °C | 50 °C[1] - 330 °C | 50 °C[1] - 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 (m² / sqft) | 0.3 / 3.2 | 0.91 / 9.8 | 0.47 / 5.1 |
| Chamber volume (L / cuft) | 62 / 2.2 | 97 / 3.5 | 170 / 6.1 |
| Interior dimensions (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 dimensions[2] (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 (standard / max) | 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 |
| Weight (kg / lb) | 44 / 97 | 55 / 121 | 69 / 152 |
| Energy consumption at 150° C (W) | 275 | 389 | 448 |

[1] Temperatures as low as ambient +10 °C can be selected – requires open damper and no additional heat in unit. [2] 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.



Operating temperatures as high as 330 °C



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

# Heratherm 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.

**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



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

# Additional features

**Maximum convenience for sample 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 numbers | 51029327 | 51029339 |
|---|---|---|
| Model | OGS400 | OGS750 |
| Convection technology | Gravity convection | Gravity convection |
| Temperature range (°C) | +50 °C[1] - 250 °C | +50 °C[1] - 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 (m² / sqft) | 0.56 / 6.0 | 0.91 / 9.8 |
| Chamber volume (L / cuft) | 419 / 14.8 | 774 / 27.3 |
| Interior dimensions (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 dimensions[2] (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 (standard / max) | 2 / 37 | 2 / 37 |
| 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 |
| Weight (kg / lb) | 136 / 300 | 182 / 401 |
| Energy consumption at 150° C (W) | 520 | 800 |

[1] Temperatures as low as ambient +10 °C can be selected – requires open damper and no additional heat in unit. [2] 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.



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



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



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

# Heratherm Advanced Protocol Ovens

The Heratherm Large Capacity 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: +/-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

# Additional features

## 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)



Access port



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

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

| Order numbers (coated exterior) | 51029329 | 51029343 |
| --- | --- | --- |
| Model | OMH400 | OMH750 |
| Convection technology | Mechanical convection | Mechanical convection |
| Temperature range (°C) | +50 °C[1] - 250 °C[2] | +50 °C[1] - 250 °C[2] |
| 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 (m² / sqft) | 0.56 / 6.0 | 0.91 / 9.8 |
| Chamber volume (L / cuft) | 396 / 14 | 731 / 25.8 |
| Interior dimensions (mm / in (W x H x D)) | 544 x 1335 x 545 / 21.4 x 52.6 x 21.5 | 1004 x 1335 x 545 / 39.5 x 52.5 x 21.5 |
| Exterior dimensions[3] (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 (standard / max) | 2 / 37 | 2 / 37 |
| 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) | 3240 / 13.5 | 3480 / 14.5 |
| Weight (kg / lb) | 135 / 298 | 185 / 408 |
| Energy consumption at 150° C (W) | 630 | 990 |

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

**Specifications table/order numbers**

| Product | Description | Cat. No. |
|---|---|---|
| Options – factory installed: please order in conjunction with desired oven | | |
| General Protocol kit for underbench installation | 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. | 50128887 |
| Advanced Protocol kit for underbench installation | Kit for underbench installation; for all table top Advanced Protocol 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. | 51901061 |
| Access port left, small | 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. | 51900996 |
| Access port left, large | 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. | 51900997 |
| Access port right, small | 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. | 51900998 |
| Access port right, large | 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. | 51900999 |
| Access port top, small | Additional access port on center of top of unit; Ø 0.9 in for all ovens. | 51901000 |
| Access port top, large | Additional access port on center of top of unit; Ø 2.3 in for all ovens. | 51901001 |
| Door hinge left side | Door hinge on left side – available for all table top units. | 51900993 |
| Door hinge left side | Door hinge on left side – available for all 400L units. | 51901213 |

**Please contact your Thermo Scientific sales representative in case you need any specific features. We can provide a variety of custom solutions, such as:**

- **Access ports at preferred positions**

- **Stainless steel exterior**

- **Lockable door**

- **Viewing window in door**

- **Flexible sample sensor for temperature logging of sample**

- **Table top solution for cable testing**

- **Solutions for clean room applications**

- **Inner casing with conditional gas-tightness for inert gas applications**
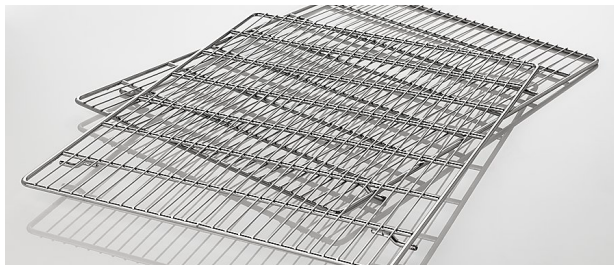
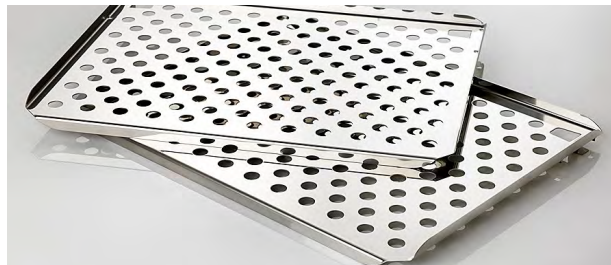Additional access ports top and right

Underbench installation kit

# Accessories

## Specifications table/order numbers

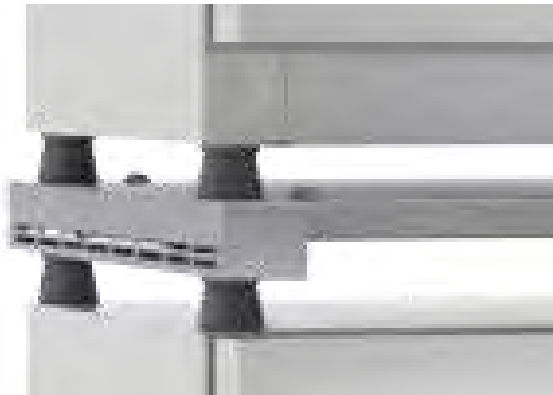| Product | Description | Cat. No. |
|---|---|---|
| **Additional shelving – gravity convection** | | |
| Additional wire mesh shelf, 60 L models | For General Protocol; Advanced Protocol; incl. 2 shelf supports; 12.28 x 15.20 in | 50127761 |
| Additional wire mesh shelf, 100 L models | For General Protocol; Advanced Protocol; incl. 2 shelf supports; 16.61 x 15.20 in | 50127762 |
| Additional wire mesh shelf, 180 L models | For General Protocol; Advanced Protocol; incl. 2 shelf supports; 16.61 x 22.07 in | 50127763 |
| Additional wire mesh shelf, 400 L models | For General Protocol ovens; incl. 2 shelf supports; 20.79 x 21.06 in | 50135245 |
| Additional wire mesh shelf, 750 L models | For General Protocol ovens; incl. 2 shelf supports; 38.74 x 21.06 in | 50135246 |
| Reinforced shelf, 180 L models | Shelf with maximum capacity of 154 lb for 180 L models, gravity convection of Advanced Protocol ovens; max total capacity is 551 lb | 50128880 |
| Stainless steel perforated shelf, 400 L models | For General Protocol oven; incl. 2 shelf supports; 20.8 x 19.6 in | 50135241 |
| Stainless steel perforated shelf, 750 L models | For General Protocol oven; incl. 2 shelf supports; 38.7 x 19.6 in | 50135242 |
| **Additional shelving – gravity convection** | | |
| Additional wire mesh shelf, 60 L models | For General Protocol; Advanced Protocol; incl. 2 shelf supports; 13.31 x 13.22 in | 50127764 |
| Additional wire mesh shelf, 100 L models | For General Protocol; Advanced Protocol; incl.2 shelf supports; 17.64 x 13.22 in | 50127765 |
| Additional wire mesh shelf, 180 L models | For General Protocol; Advanced Protocol; incl. 2 shelf supports; 17.64 x 20.12 in | 50127766 |
| Additional wire mesh shelf, 400 L models | For Advanced Protocol ovens; incl. 2 shelf supports; 20.79 x 21.06 in | 50135245 |
| Additional wire mesh shelf, 750 L models | For Advanced Protocol ovens; incl. 2 shelf supports; 38.74 x 21.06 in | 50135246 |
| Stainless steel perforated shelf, 60 L models | For General Protocol, Advanced Protocol, ovens; incl. 2 shelf supports; 12.95 x 14.80 in | 50127773 |
| Stainless steel perforated shelf, 100 L models | For General Protocol, Advanced Protocol, ovens; incl. 2 shelf supports; 17.28 x 14.80 in | 50127774 |
| Stainless steel perforated shelf, 180 L models | For General Protocol, Advanced Protocol, ovens; incl. 2 shelf supports; 17.28 x 19.88 in | 50127777 |
| Reinforced shelf, 180 L models | Shelf with maximum capacity of 154 lb for 180 L models, mechanical convection of Advanced Protocol ovens; max total capacity is 551 lb | 50128881 |
| Stainless steel perforated shelf, 400L models | Stainless steel perforated shelf for Advanced Protocol oven; incl. 2 shelf supports; 20.8 x 19.6 in | 50135241 |
| Stainless steel perforated shelf, 750L models | Stainless steel perforated shelf for Advanced Protocol oven; incl. 2 shelf supports; 38.7 x 19.6 in | 50135242 |



Wire mesh shelves



Stainless steel perforated shelves



Reinforced shelves

# Accessories cont.

**Specifications table/order numbers**

| Product | Description | Cat. No. |
|---------|-------------|----------|
| **Silicone free viton door sealing** | | |
| Silicone free viton door sealing, 60 L models | Silicone free viton door sealing for all 60 L ovens | 50130657 |
| Silicone free viton door sealing, 100 L models | Silicone free viton door sealing for all 100 L ovens | 50130658 |
| Silicone free viton door sealing, 180 L models | Silicone free viton door sealing for all 180 L ovens | 50130659 |
| Silicone free viton door sealing, 400L & 750L models | Factory installed silicone free viton door sealing. Please order with 400L or 750L oven. Note: The sealing cannot be installed in the field on these free standing 400L and 750 L units. | 51901344 |
| **Fresh air filter** | | |
| Fresh air particle filter, all ovens models | Fresh air particle filter for connection to the fresh air vent (intake); for all ovens models | 50127566 |
| **Stacking kits** | | |
| Stacking kit, all 60 L models | Stacking kit to stack two 60 L models | 50126665 |
| Stacking kit, all 100 L models | Stacking kit to stack two 100 L models, or 60 L on 100 L | 50126666 |
| Stacking kit, all 180 L models | Stacking kit to stack two 100 L models, or 60 L /100 L on 180 L | 50126667 |
| **Support Stands** | | |
| Support stand, all 60 L models | Support stand with casters for 60 L models; height including casters: 7.36 in | 50127741 |
| Support stand, all 60 L models | Support stand with casters for 100 L models; height including casters: 7.36 in | 50127742 |
| Support stand, all 180 L models | Support stand with casters for 180 L models; height including casters: 7.36 in | 50127743 |



Stacking kit



Support stand with casters



Fresh air particle filter

# Data capture for heating and drying ovens
## Thermo Scientific™ Smart-Vue™ Wireless Monitoring Solution

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