

Incubator Oven

Controller SMART-Lab™ Jog-Dial

Anytime - Anywhere connected laboratory



SMART-Lab™ Controller



- full touch screen TFT LCD:
- WiRe™ app service, remote control system
- variable program settings
- self-diagnosis and interactive temperature graph
- automatic data recording and password protection
- data transfer to PC by USB memory
- digital calibration (offset function)
- min-/max-temperature memory & program function
- push-alarm service to smartphone or tablet PC

more information on 8 - 11

SMART-Lab devices

Incubator	Oven
SWIG 70°C, 32 / 50 / 105 / 155 l - page 59	SWON 230°C, 32/50/105/155 l - page 77
SWIF 70°C, 50/105/155 l - page 61	SWOF 250°C, 50/105/155 l - page 79
SWIR 0-60°C, refrigerated - page 65	SWOV 200°C, 18.6/30/70 l, 750mmHg - page 81
STH -20/-40°C, 98% rel. hum. - page 72	
STH-E -20°C, 95% rel. hum. - page 73	
SWGC Illumination, 95% rel. hum. - page 74	

Jog-Dial controller

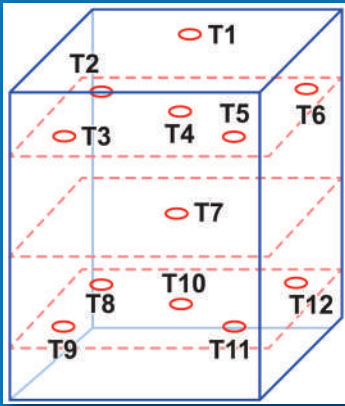
- ergonomic design for easy and convenient usage
- 2-way Jog-Dial knob provides simple setting of required temperature and time
- high quality illuminated LCD
- „MAIN“ and „SUB“ button to access all menus



Incubator	Oven
WIG 70°C, 32 / 50 / 105 / 155 l on page 58	WON 230°C, 32/50/105/155 l on page 76
WIF 70°C, 50/105/155 l on page 60	WOF 250°C, 50/105/155 l on page 78
WIR 0-60°C, refrigerated on page 64	WOV 200°C, 18.6/30/70 l, 750mmHg on page 80

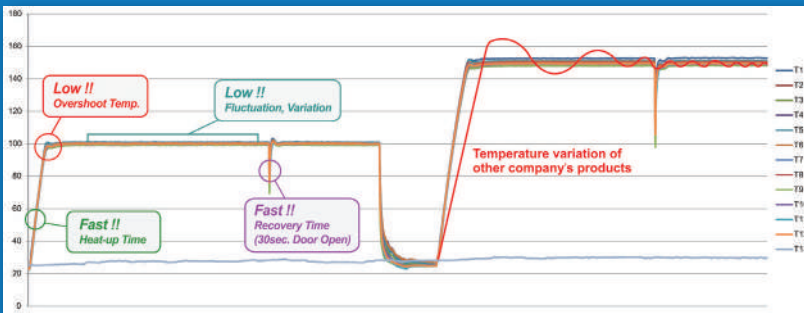
Incubator Oven

General information



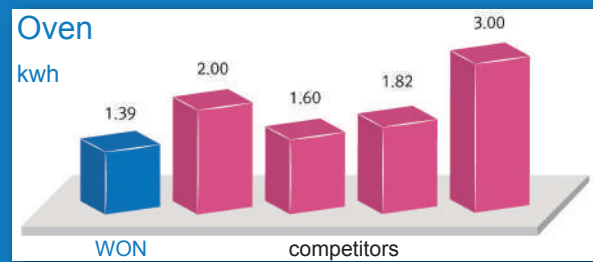
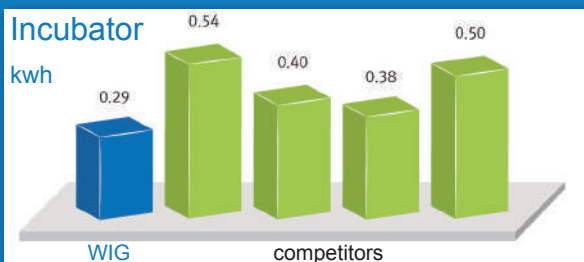
Temperature uniformity successfully tested by ASTM standards

All incubators and ovens are thoroughly tested, using 12 temperature sensors and the latest instruments to obtain validation, which corresponds to international standards.



Green product

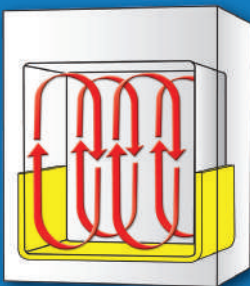
All incubators and ovens achieve minimum power consumption by using heating elements consuming minimum power adjusted for the capacity and temperature of the chamber.



Incubator air-flow

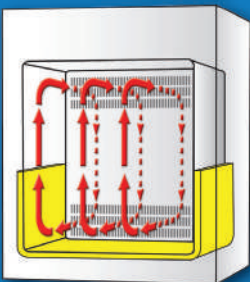
Gravity-air

The incubators gravity-air flow is established by creating radiant and conductive heat on three sides of the chamber (bottom, left and right side).



Forced-air

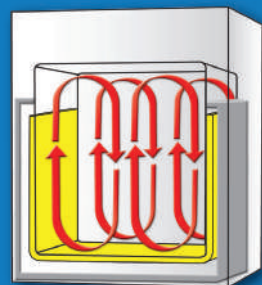
The incubators forced-air flow is established by a three sided heating element in combination with a very effective fan placed in an air-flow room for best temperature uniformity in the whole chamber.



Oven air-flow

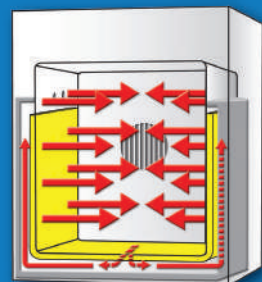
Gravity-air

The ovens gravity-air flow is established by heating up air in a pre-heating zone by heating elements on the bottom, left and right side. The pre-heated air will be restrictively provided into the chamber.



Forced-air

The ovens forced-air flow is established by a very effective fan installed in the rear of the chamber sucking air from the chamber into the pre-heating zone where heating elements on the bottom, left and right side heat up air. The pre-heated air is uniformly and quickly provided into the chamber by a special side and bottom structure.



Oven | vacuum oven

Jog-Dial controller, 10 - 750 mm Hg (0.63 mbar), up to 200°C, 18.6 / 30 / 70 l



Optimized gas exchange



Wise remote



Jog-Dial controller

WOV 200°C, 18.6/30/70 l, 750mmHg

Ideal for:

- drying, baking, conditioning, curing, out-glassing solids and liquids, vacuum embedding, moisture testing, plating and aging test

Features:

- very easy and convenient for vacuuming and venting, easy to read vacuum gauge
- high quality door sealing: high temperature grade silicone molded gasket
- superior uniformity and stability
- safety window: tempered safety glass 12T & polycarbonate 5T
- RS232C interface for monitoring and controlling (WireRemote)
- stainless steel interior, powder-coated steel body and glass wool insulation
- 2x aluminium shelves included
- storage function for set values of alarm and timer
- backlight LCD display
- CE & UL/CUL certified and unique serial number for tracing

Safety mechanism:

- locking mode
- overheat and over-current protection
- sensor error detection and leakage breaker

Controller:

- **Jog-Dial controller (PID)** with 2-way knob (turn and push), digital LCD with backlight, and two durable setting buttons



WOV-30 with 2x aluminium shelves (included)

Model	WOV-20	WOV-30	WOV-70
Capacity	18.6 l	30 l	70 l
Vacuum range, level & rate	10 - 750 mmHg, 0.63 mbar, 0.39 mbar/h		
Temperature range, fluctuation & sensor	room temperature +5°C - 200°C, fluctuation: ±0.5°C at 100°C & 150°C, PT 100 sensor		
Temperature variation	±2.0°C at 100°C, ±3.0°C at 150°C		±2.5°C at 100°C, ±3.5 at 150°C
Heating power	2 x 170 W, 2 x 130 W		2 x 350 W, 2 x 450 W
Heat-up time	60 min. to 100°C 90 min. to 150°C	70 min. to 100°C 100 min. to 150°C	80 min. to 100°C 100 min. to 150°C
Timer & alarm	99hr 59 min (delay & continuous run) and timer end		
Resolution	control: ±1.0°C, display: ±1.0°C		
Height between shelves	87 mm	98 mm	133 mm
Vacuum inlet valve size	outer Ø10 mm		
Internal dimensions (W x D x H)	265 x 290 x 265 mm	300 x 330 x 300 mm	400 x 435 x 400 mm
External dimensions (W x D x H), net weight	480 x 475 x 552 mm, 48 kg	515 x 515 x 587 mm, 55 kg	618 x 620 x 687 mm, 85 kg
Packing size & gross weight	585 x 580 x 795 mm, 59 kg	620 x 620 x 830 mm, 67 kg	725 x 720 x 930 mm, 100 kg
Power supply	1 Phase AC 120V, 60 Hz or AC 230V, 50/60 Hz		
Power consumption	600 W	600 W	1,6 kW
Order number 230V	DH.WOV03020	DH.WOV03030	DH.WOV03070
Order number 120V	DH.WOV04020	DH.WOV04030	DH.WOV04070

Accessories: Suitable shelves can be found on page 86

Oven | vacuum oven

SMART-Lab™ controller, 10 - 750 mm Hg (0.63 mbar), up to 200°C, 18.6 / 30 / 70 l



Optimized gas exchange



SMART-Lab™ controller



WiRe™ app service

SWOV 200°C, 18.6/30/70 l, 750mmHg

Ideal for:

- drying, baking, conditioning, curing, out-glassing solids and liquids, vacuum embedding, moisture testing, plating and aging test

Features:

- very easy and convenient for vacuuming and venting, easy to read vacuum gauge
- high quality door sealing: high temperature grade silicone molded gasket
- superior uniformity and stability
- safety window: tempered safety glass 12T & polycarbonate 5T
- compact new body design
- 2x aluminium shelves included
- stainless steel interior, powder-coated steel body and glass wool insulation
- CE & UL/CUL certified and unique serial number for tracing

Safety mechanism:

- push alarm service to your smartphone
- overheat and over-current protection
- sensor error detection and leakage breaker

Controller:

- **Smart-Lab™ controller** with 4" full touch screen TFT LCD:
 - ◆ WiRe™ app service, remote control system
 - ◆ variable program settings
 - ◆ self-diagnostic function
 - ◆ automatic data recording
 - ◆ data transfer to PC by USB memory
 - ◆ Internet connectivity with WiFi



SWOV-30 with 2x aluminium shelves (included)

Model	SWOV-20	SWOV-30	SWOV-70
Capacity	18.6 l	30 l	70 l
Vacuum range, level & rate	10 - 750 mmHg, 0.63 mbar, 0.39 mbar/h		
Temperature range, fluctuation & sensor	room temperature +5°C - 200°C, fluctuation: ±0.5°C at 100°C & 150°C, PT 100 sensor		
Temperature variation	±2.0°C at 100°C, ±3.0°C at 150°C		±2.5°C at 100°C, ±3.5 at 150°C
Heating power	2 x 170 W, 2 x 130 W		2 x 350 W, 2 x 450 W
Heat-up time	60 min. to 100°C 90 min. to 150°C	70 min. to 100°C 100 min. to 150°C	80 min. to 100°C 100 min. to 150°C
Timer & alarm	99hr 59 min (delay & continuous run), error status and timer end		
Resolution	control: ±1.0°C, display: ±1.0°C		
Height between shelves	87 mm	98 mm	133 mm
Vacuum inlet valve size	outer Ø10 mm		
Internal dimensions (W x D x H)	265 x 290 x 265 mm	300 x 330 x 300 mm	400 x 435 x 400 mm
External dimensions (W x D x H), net weight	480 x 475 x 552 mm, 48 kg	515 x 515 x 587 mm, 55 kg	618 x 620 x 687 mm, 85 kg
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Power consumption	600 W	600 W	1,6 kW
Order number 230V	DH.SWOV03020	DH.SWOV03030	DH.SWOV03070
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