

# 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

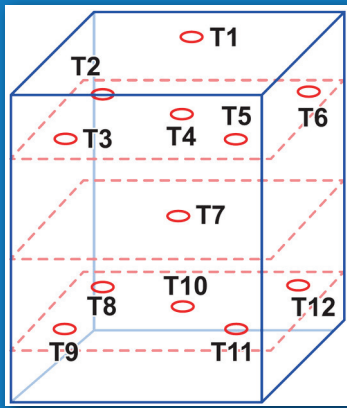
Incubator	Oven
<b>SWIG</b> 70°C, 32 / 50 / 105 / 155 l - <b>page 59</b>	<b>SWON</b> 230°C, 32/50/105/155 l - <b>page 77</b>
<b>SWIF</b> 70°C, 50/105/155 l - <b>page 61</b>	<b>SWOF</b> 250°C, 50/105/155 l - <b>page 79</b>
<b>SWIR</b> 0-60°C, refrigerated - <b>page 65</b>	<b>SWOV</b> 200°C, 18.6/30/70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

### 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

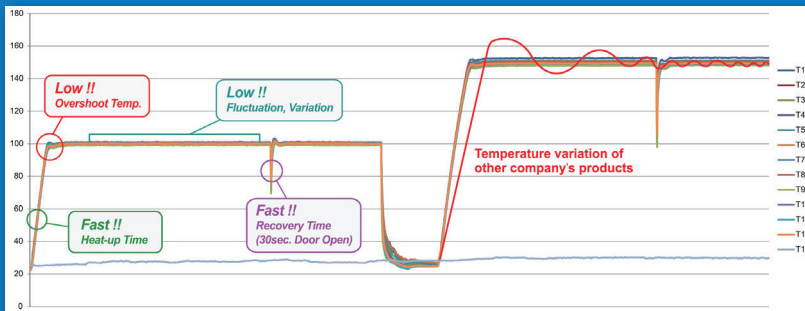


Incubator	Oven
<b>WIG</b> 70°C, 32 / 50 / 105 / 155 l on <b>page 58</b>	<b>WON</b> 230°C, 32/50/105/155 l on <b>page 76</b>
<b>WIF</b> 70°C, 50/105/155 l on <b>page 60</b>	<b>WOF</b> 250°C, 50/105/155 l on <b>page 78</b>
<b>WIR</b> 0-60°C, refrigerated on <b>page 64</b>	<b>WOV</b> 200°C, 18.6/30/70 l,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



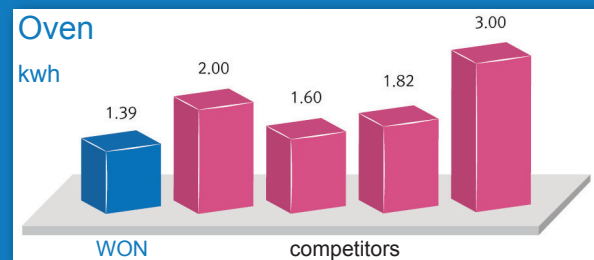
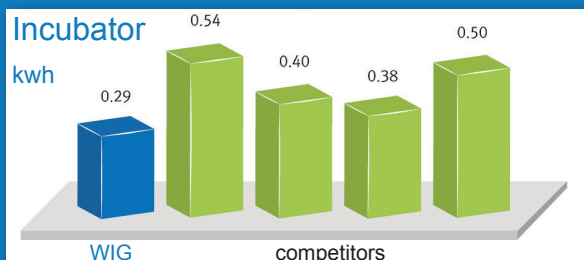
## Temperature uniformity successfully tested by ASTM standards

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

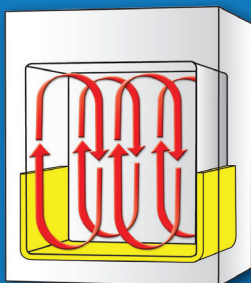


## Green product

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

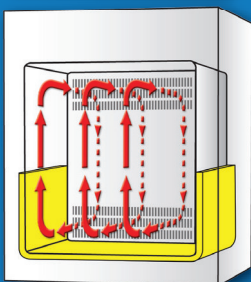


## Incubator air-flow



### Gravity-air

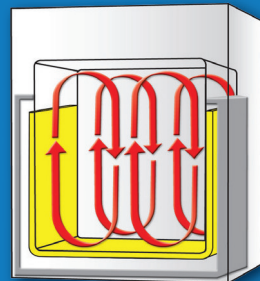
The incubators gravity-air flow is established by creating radiant and conductive heat on three sides of the chamber (bottom, left and right side).



### Forced-air

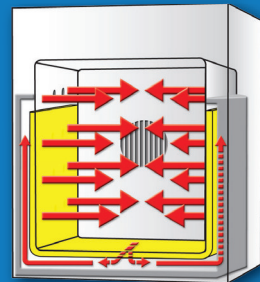
The incubators forced-air flow is established by a three sided heating element in combination with a very effective fan placed in an air-flow room for best temperature uniformity in the whole chamber.

## 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.

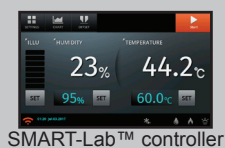


### Forced-air

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.

# Incubator | gravity-air

SMART-Lab™ controller, gravity-air flow, up to 70°C, 32 / 50 / 105 / 155 l



## SWIG 70°C, 32 / 50 / 105 / 155 l

### Ideal for:

- microorganism culture, animal and plant cell culture, constant temperature, germination, etc.

### Features:

- gravity-air flow by natural flow preventing cross contamination of samples
- temperature uniformity and accuracy by high performance 3-sided heating mechanism
- 2x PE-coated steel wire shelves included
- corrosion resistant stainless steel chamber, powder-coated body
- inner tempered glass door with silicone packing offers easy observation without door opening
- ambient to 70°C of temperature range, fluctuation of  $\pm 0.2^\circ\text{C}$  at  $37^\circ\text{C}$ ,  $\pm 0.3^\circ\text{C}$  at  $50^\circ\text{C}$
- storage function for the set values of temperature and timer
- alarm function: error status and timer end
- CE & UL/CUL certified and unique serial number for tracing

### Safety mechanism:

- overheat and over-current protection
- sensor error detection

### 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

**IQ | OQ**  
available  
page 12 for details



SWIG-105 with SMART-Lab controller  
and 2x PE-coated steel wire shelves (included)

Model	SWIG-32	SWIG-50	SWIG-105	SWIG-115
Capacity	32 l	50 l	105 l	155 l
Temperature range & control resolution	room temperature +5°C - +70°C, ±0.1°C			
Temperature fluctuation & sensor	±0.2°C at 37°C, ±0.3°C at 50°C, PT 100 sensor			
Temperature variation	±0.6°C at 37°C, ±1.0°C at 50°C			
Heater power	150 W	200 W	300 W	400 W
Heat-up time	25 min to 37°C, 40 min to 50°C			30 min to 37°C, 40 min to 50°C
Recovery time (door open 30sec)	8 min to 37°C, 12 min to 50°C		10 min to 37°C, 15 min to 50°C	
Timer & alarm	99hr 59 min (delay & continuous run)			
Shelves	2 x PE-coated steel wire shelves included, total load 32 kg (16 kg per shelf)			
Ventilation hole	1 ventilation hole (inner Ø 35 mm) with stainless steel cap			
Internal dimensions (W x D x H, mm)	312 x 290 x 360 mm	370 x 350 x 420 mm	485 x 410 x 535 mm	550 x 475 x 600 mm
External dimensions (W x D x H, mm), net weight	458 x 477 x 624 mm, 32 kg	518 x 537 x 701 mm, 40 kg	635 x 595 x 841 mm, 59 kg	700 x 660 x 906 mm, 71 kg
Packing size & gross weight	568 x 592 x 698 mm, 39 kg	628 x 652 x 775 mm, 53 kg	731 x 710 x 1018 mm, 67 kg	796 x 775 x 1083 mm, 78 kg
Power supply	1 Phase AC 120V, 60 Hz or AC 230V, 50/60 Hz			
Power consumption	159 W	169,9 W	292,9 W	420,5 W
Energy consumption at 37°C/ at 50°C	34 Wh/ 81 Wh	41 Wh/103 Wh	63 Wh/ 152 Wh	99 Wh/ 212 Wh
Order number 230V	DH.SWIG03032	DH.SWIG03050	DH.SWIG03105	DH.SWIG03155
Order number 120V	DH.SWIG04032	DH.SWIG04050	DH.SWIG04105	DH.SWIG04155

Accessories: Suitable stainless steel and PE-coated shelves can be found on page 67