

# 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

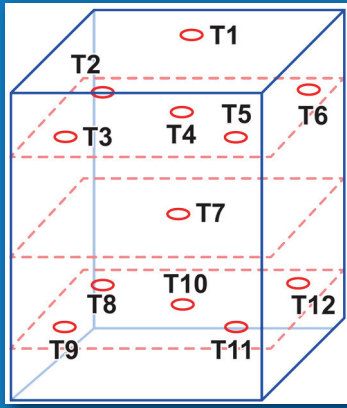
Incubator	Oven
<b>SWIG</b> 70°C, 32 / 50 / 105 / 155 l - <b>page 59</b>	<b>SWON</b> 230°C, 32/50/105/155 l - <b>page 77</b>
<b>SWIF</b> 70°C, 50/105/155 l - <b>page 61</b>	<b>SWOF</b> 250°C, 50/105/155 l - <b>page 79</b>
<b>SWIR</b> 0-60°C, refrigerated - <b>page 65</b>	<b>SWOV</b> 200°C, 18.6/30/70 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

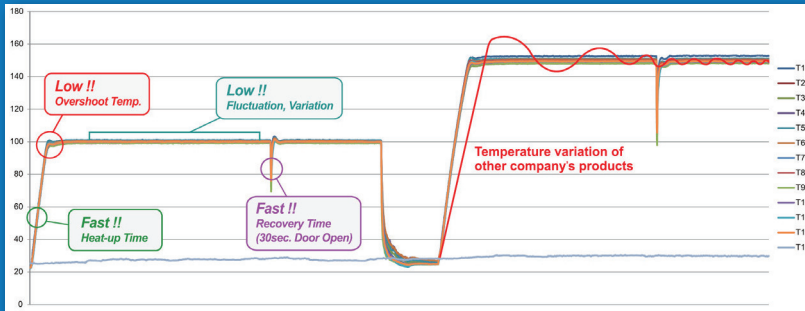


Incubator	Oven
<b>WIG</b> 70°C, 32 / 50 / 105 / 155 l on <b>page 58</b>	<b>WON</b> 230°C, 32/50/105/155 l on <b>page 76</b>
<b>WIF</b> 70°C, 50/105/155 l on <b>page 60</b>	<b>WOF</b> 250°C, 50/105/155 l on <b>page 78</b>
<b>WIR</b> 0-60°C, refrigerated on <b>page 64</b>	<b>WOV</b> 200°C, 18.6/30/70 l,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

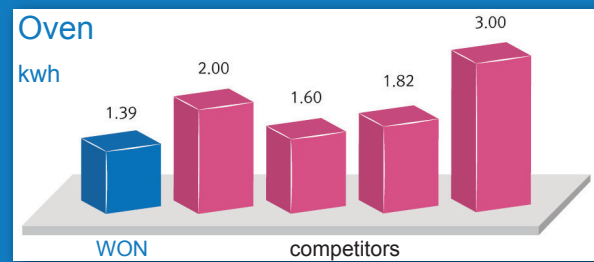
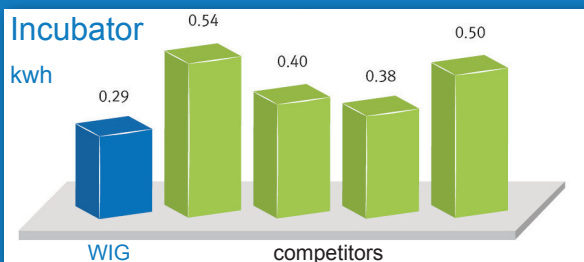


# Incubator Oven

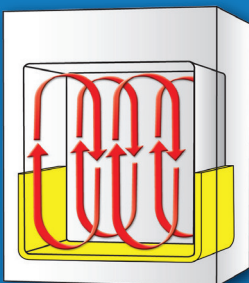
## General information

### 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.

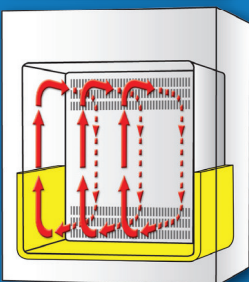


### Incubator air-flow



#### Gravity-air

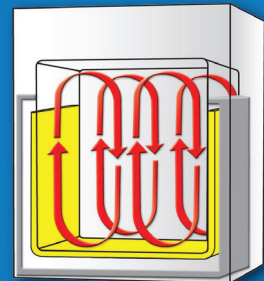
The incubators gravity-air flow is established by creating radiant and conductive heat on three sides of the chamber (bottom, left and right side).



#### Forced-air

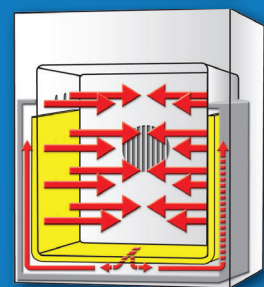
The incubators forced-air flow is established by a three sided heating element in combination with a very effective fan placed in an air-flow room for best temperature uniformity in the whole chamber.

### 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 | growth chamber

Smart-Lab controller, 0-12,000/15,000 Lux, 10°C - 60°C (refrigerated), up to 95% relative humidity

95% RH  
10-60°C  
Illumination



SMART-Lab™ controller



WiRe™ app service

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

## SWGC Illumination, 95% rel. hum.

### Ideal for:

- growth of organisms and plants, stability and endurance testing of materials, environmental simulations
- stability product self-life QC testing

### Features:

- CFC free refrigerant (R-404A)
- 3-sided light bank system: intensity of light is controlled by 8 levels and displayed on LCD
- inner tempered glass door with silicone packing offers easy observation without door opening
- PE-coated wire shelves included (4 or 8 acc. to model)
- 3-sided magnetic doors with light banks
- stainless steel interior and powder-coated body
- CE 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 7" 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



SWGC-450, with illumination and 4x PE-coated wire shelves

Model	SWGC-450	SWGC-1000
Capacity	432 l (1 door)	864 l (2 doors)
Temperature range & variation	10°C - +60°C, ±1°C at 20°C	
Temperature fluctuation	±0.5°C at 10°C, ±0.5°C at 25°C (0% light intensity) / ±1°C at 10°C, ±1°C at 25°C (100% light intensity)	
Humidity range, fluctuation & variation	30% - 95% RH, ±1%, ±3% at 60°C	
Humidifier	evaporation by fan with heater	
Illumination lamp & range	14 x FPL 55 W, 0 to 12,000 Lux	28 x FPL 55 W, 0 to 15,000 Lux
Illumination bank	3x light banks: left, right, front	
Temperature & humidity sensor	temperature: PT100, humidity: capacitive sensor	
Heat-up time (up to 37°C)	11 min (0% illumination) / 9 min (100% illumination)	
Cool-down time (down to 10°C)	13 min (0% illumination) / 15 min (100% illumination)	
Recovery time (door open 30sec)	3 min. to 10°C, 1 min. to 37°C (0% illumination); 5 min. to 10°C, 1 min. to 37°C (100% illumination)	
Heating power (temperature & humidity)	1.5 kW	3.0 kW
Compressor	370 W	750 W
Program function	temperature and humidity: 120 patterns, 1.200 segments; light bank: 8 steps	
Shelves	4 x PE-coated steel wire shelves (16 kg / shelf)	8 x PE-coated steel wire shelves (16 kg / shelf)
Internal dimensions (W x D x H)	650 x 700 x 1050 mm	1200 x 790 x 1050 mm
External dimensions (W x D x H)	850 x 1090 x 1965 mm	1200 x 1150 x 1965 mm
Packing size & gross weight	1400 x 1220 x 2210 mm, 435 kg	1600 x 1500 x 2200 mm, 585 kg
Power supply	1 Phase AC 120V, 60 Hz or AC 230V, 50/60 Hz or 3 Phase	
Power consumption	4,8 kW	6,5 kW
Order number 230V*	DH.SWGC00450	DH.SWGC01000
Order number 120V*	DH.SWGC50450	DH.SWGC51000
Order number 3 Phase	DH.SWGC60450	DH.SWGC61000

\* 230V and 120V models not available in Europe