

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

### Jog-Dial controller

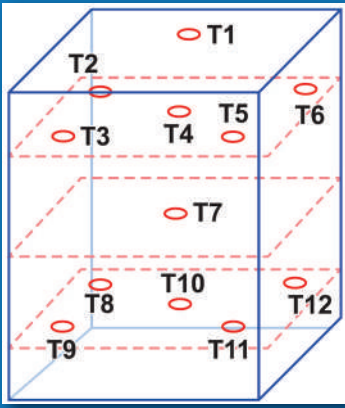
- ergonomic design for easy and convenient usage
- 2-way Jog-Dial knob provides simple setting of required temperature and time
- high quality illuminated LCD
- „MAIN“ and „SUB“ button to access all menus



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

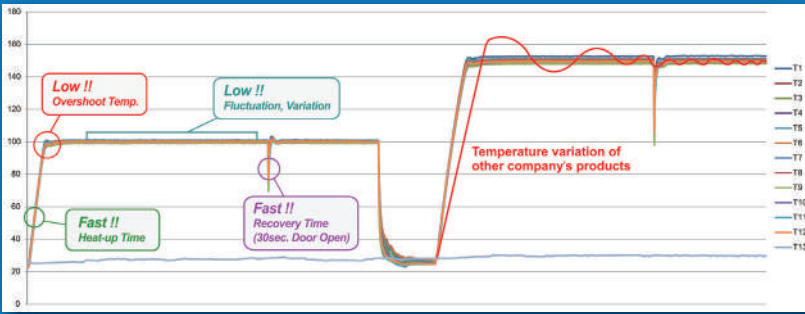
# Incubator Oven

## General information



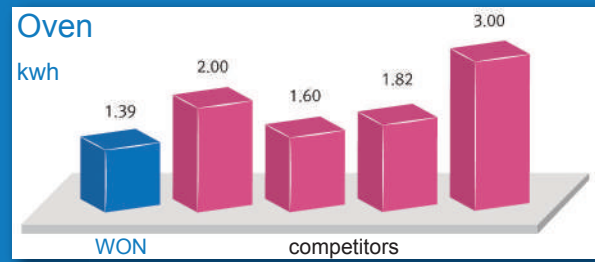
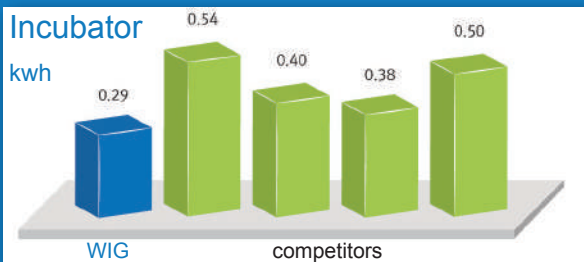
### Temperature uniformity successfully tested by ASTM standards

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

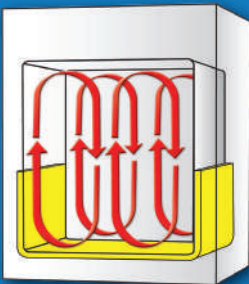
All incubators and ovens achieve minimum power consumption by using heating elements consuming minimum power adjusted for the capacity and temperature of the chamber.



### Incubator air-flow

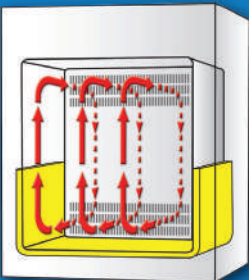
#### Gravity-air

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

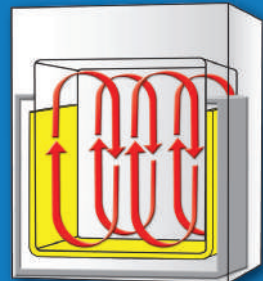
The incubators forced-air flow is established by a three sided heating element in combination with a very effective fan placed in an air-flow room for best temperature uniformity in the whole chamber.



### Oven air-flow

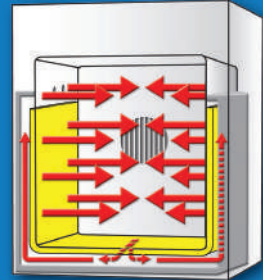
#### Gravity-air

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.



# Incubator | growth chamber

**NEW**

Smart-Lab™ controller, -20°C/-40°C up to 100°C, up to 98% relative humidity

98% RH  
-20/-40°C  
100°C



SMART-Lab™ controller



WiRe™ app service

## STH -20/-40°C, 98% rel. hum.

### Ideal for:

- growth of organisms, stability and endurance testing of materials

### Features:

- CFC free refrigerant (R-404A) and automatic defrost system
- powerful and silent dual fan motor
- electronic humidity sensor
- large viewing window with membrane heating element (moisture proof)
- sliding water supply tank: auto water supplementing system
- stainless steel interior and powder-coated steel body
- 3x perforated stainless steel shelves included
- 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
- low water level alarm lamp
- door ajar and power failure alarm

### 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

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



STH-155 with 3x perforated platforms (included)

Model	STH-155	STH-L155	STH-305	STH-L305	STH-420	STH-L420	STH-800	STH-L800
Capacity	155 l		305 l		420 l		800 l	
Temperature & humidity range	-20°C - 100°C, 30% - 98% RH	-40°C - 100°C, 30% - 98% RH	-20°C - 100°C, 30% - 98% RH	-40°C - 100°C, 30% - 98% RH	-20°C - 100°C, 30% - 98% RH	-40°C - 100°C, 30% - 98% RH	-20°C - 100°C, 30% - 98% RH	-40°C - 100°C, 30% - 98% RH
Compressor	7/8 HP	1.5 HP	1.5 HP	2 HP	1.5 HP	3HP	3 HP	4 HP
Heater for temperature	1.5 kW	1.5 kW	2.0 kW	2.0 kW	2.2 kW	2.2 kW	2.5 kW	2.5 kW
Heater for humidity	2.0 kW	2.0 kW	3.0 kW	2.0 kW	3.0 kW	3.0 kW	3.0 kW	3.0 kW
Temp. accu. & stability	±0.3°C, ±0.3°C							
Hum. accu. & stability	±0.3% RH, ±0.3% RH at 70%							
Heat-up/cool-down time	35 min (-20°C to 80°C)/45 min (+20°C to -20°C)							
Sensor	PT100 & capacitive sensor							
Internal dimensions (W x D x H)	505 x 505 x 610 mm		620 x 620 x 800 mm		700 x 700 x 820 mm		1000 x 800 x 1000 mm	
External dimensions (W x D x H), net weight	1100x960x1550 mm		1310x1080x1765 mm		1390x1135x1695 mm		1570x1245x2060 mm	
Packing size & gross weight	1340x1160x1750 mm 290 kg		1520x1250x2080 mm 369 kg		1600x1300x2020 mm 478 kg		1780x1410x2370 mm 678 kg	
Power supply	1 Phase AC 120V, 60 Hz or AC 230V, 50/60 Hz or 3 Phase							
Power consumption	4,7 kW	6,2 kW	5,7 kW	7,9 kW	6,3 kW	9,9 kW	9 kW	12,7 kW
Order number 230V*	DH.STH01155	DH.STH02155	DH.STH01305	DH.STH02305	DH.STH01420	DH.STH02420	DH.STH01800	DH.STH02800
Order number 120V*	DH.STH05155	DH.STH06155	DH.STH05305	DH.STH06305	DH.STH05420	DH.STH06420	DH.STH05800	DH.STH06800
Order number 3 Phase	DH.STH07155	DH.STH08155	DH.STH07305	DH.STH08305	DH.STH07420	DH.STH08420	DH.STH07800	DH.STH08800

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

Accessories: Suitable platforms and temperature recorder can be found on page 75

**NEW**

# Incubator | growth chamber

Smart-Lab™ controller, -20°C up to +80°C, up to 95° relative humidity

95% RH  
-20°C  
100°C



SMART-Lab™ controller



WiRe™ app service

## STH-E -20°C, 95% rel. hum.

### Ideal for:

- growth of organisms, stability and endurance testing of materials

### Features:

- economical and practical type
- CFC free refrigerant (R-404A) and automatic defrost system
- powerful and silent dual fan motor
- inner tempered glass door with silicone packing offers easy observation without door opening
- stainless steel interior and powder-coated steel body
- 3x perforated stainless steel shelves included
- 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
- low water level alarm lamp
- high-low temperature protection
- door ajar and power failure alarm

### 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

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



STH-E155 with 3x perforated platforms (included)

Model	STH-E155	STH-E305	STH-E420	STH-E800
Capacity	155 l	305 l	420 l	800 l
Temperature range & accuracy	-20°C - +80°C, ±0.3°C (stability ±1.0°C)			
Humidity range & accuracy	30% - 95% RH, ±2% (stability ±3% RH)			
Compressor	7/8 HP	1.5 HP	1.5 HP	3 HP
Heater for temperature	1.5 kW	2.0 kW	2.2 kW	2.5 kW
Heater for humidity	2.0 kW	3.0 kW	3.0 kW	3.0 kW
Sensor	PT100 & capacitive sensor			
Internal dimensions (W x D x H)	505 x 505 x 610 mm	620 x 620 x 800 mm	750 x 660 x 860 mm	1000 x 800 x 1000 mm
External dimensions (W x D x H), net weight	745 x 920 x 1645 mm 290 kg	820 x 1290 x 1720 mm 309 kg	990 x 1075 x 1885 mm 378 kg	1200 x 1100 x 1920 mm 558 kg
Packing size & gross weight	990x1120x1850 mm 355 kg	1220x1220x2050 mm 369 kg	1800x1800x2160 mm 478 kg	1490x1320x2200 mm 678 kg
Power supply	1 Phase AC 120V, 60 Hz or AC 230V, 50/60 Hz or 3 Phase			
Power consumption	4,4 kW	5,7 kW	6,3 kW	8,2 kW
Order number 230V*	DH.STHE0155	DH.STHE0305	DH.STHE0420	DH.STHE0800
Order number 120V*	DH.STHE4155	DH.STHE4305	DH.STHE4420	DH.STHE4800
Order number 3 Phase	DH.STHE5155	DH.STHE5305	DH.STHE5420	DH.STHE5800

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

Accessories: Suitable platforms and temperature recorder can be found on page 75

# 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

## 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

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



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