

# 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

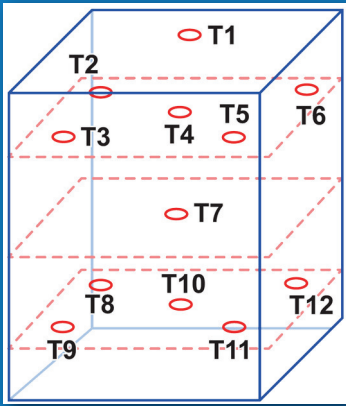
- ergonomic design for easy and convenient usage
- 2-way Jog-Dial knob provides simple setting of required temperature and time
- high quality illuminated LCD
- „MAIN“ and „SUB“ button to access all menus



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>

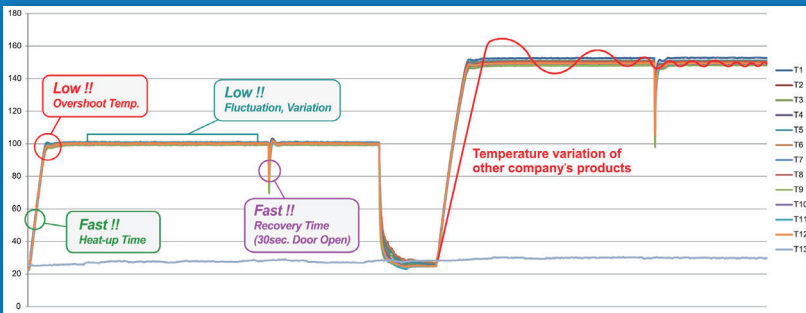
# Incubator Oven

## General information



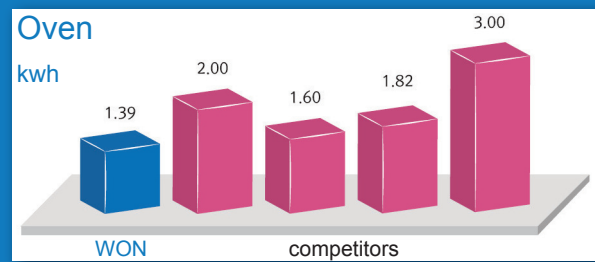
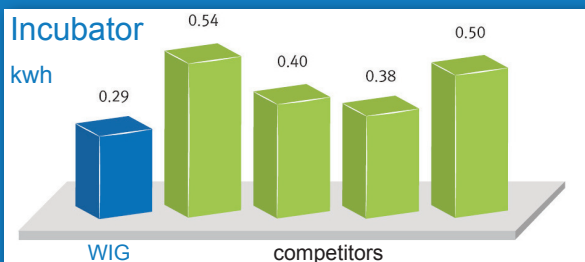
### Temperature uniformity successfully tested by ASTM standards

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

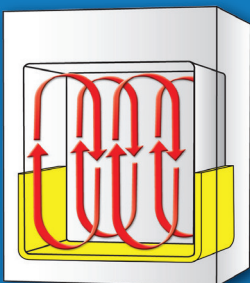
All incubators and ovens achieve minimum power consumption by using heating elements consuming minimum power adjusted for the capacity and temperature of the chamber.



### Incubator air-flow

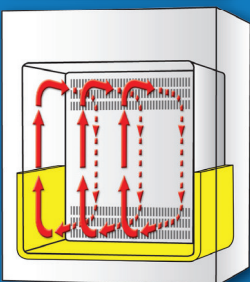
#### Gravity-air

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

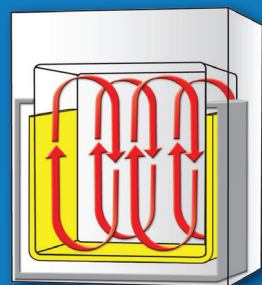
The incubators forced-air flow is established by a three sided heating element in combination with a very effective fan placed in an air-flow room for best temperature uniformity in the whole chamber.



### Oven air-flow

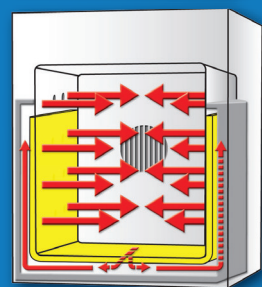
#### Gravity-air

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.



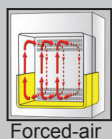
#### Forced-air

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 | forced-air | B.O.D.

Jog-Dial controller, forced-air convection, 0°C - 60°C (refrigerated), 150 / 250 / 420 / 700 l



Forced-air



Wise remote



Jog-Dial controller

## WIR 0-60°C, refrigerated

### Ideal for:

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

### Features:

- CFC free refrigerant (R-404A)
- intelligent refrigerator control prevents compressor overload
- superior temperature uniformity by forced-air convection
- stainless steel chamber, powder-coated body
- tempered glass door to observe samples during incubation
- 3x PE-coated steel wire shelves included
- RS232C interface for monitoring and controlling (WireRemote)
- storage function for set values: alarm and temperature
- 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

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



WIR-150 with Jog-Dial controller and 3x PE-coated steel wire shelves (included)

Model	WIR-150	WIR-250	WIR-420	WIR-700
Capacity	150 l	250 l	420 l	700 l
Temperature range & accuracy	0°C - +60°C, ±0.2°C at 37°C (refrigerated)			
Temperature uniformity & sensor	±0.5°C at 37°C, ±1.4°C at 50°C, PT100 sensor			
Heat-up time	20 min to 37°C, 20 min to 50°C		35 min to 37°C, 35 min to 50°C	
Recovery time (door open 30sec)	10 min to 37°C, 12 min to 50°C		12 min to 37°C, 15 min to 50°C	
Heater power	700 W	1 kW	1.2 kW	2 kW
Compressor	190 W	250 W	370 W	370 W
Timer & alarm	99hr 59 min (delay & continuous run), error status and timer end			
Shelves	3 x PE-coated steel wire shelves included, total load 48 kg (16 kg per shelf)			
Internal dimensions (W x D x H)	505 x 505 x 610 mm	505 x 505 x 1000 mm	705 x 605 x 1000 mm	800 x 700 x 1250 mm
External dimensions (W x D x H), net weight	640 x 832 x 1313 mm, 118 kg	640 x 832 x 1703 mm, 157 kg	840 x 932 x 1753 mm, 202 kg	935 x 1027 x 2000 mm, 234 kg
Packing size & gross weight	900 x 1000 x 1650 mm, 191 kg	900 x 1000 x 2040 mm, 217 kg	1100 x 1100 x 2140 mm, 277 kg	1220 x 1220 x 2260 mm, 313 kg
Power supply	1 Phase AC 120V, 60 Hz or AC 230V, 50/60 Hz			
Power consumption	1,6 kW	1,8 kW	2,3 kW	2,4 kW
Order number 230V	DH.WIR03150	DH.WIR03250	DH.WIR03420	DH.WIR03700
Order number 120V	DH.WIR04150	DH.WIR04250	DH.WIR04420	DH.WIR04700

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