



# BOLD LINE TOP STAGE INCUBATOR

Electrically heated top stage incubator with heated glass



[www.oko-lab.com](http://www.oko-lab.com)



## **Bold Line Top Stage Incubator consists of:**

- Temperature controller
- Gas controller (CO<sub>2</sub> or dual CO<sub>2</sub>/O<sub>2</sub>)
- Incubating chamber
- Humidity module
- Touch screen interface
- Smart box (optional)

The Bold Line Top Stage Incubator maintains the required conditions for live cell imaging directly on the microscope stage.



## **TEMPERATURE CONTROLLER**

H301-T-UNIT-BL-PLUS is the most advanced solution for temperature control. It can run in two different modes: Sample or Chamber feedback.

It is compatible with Digital Gas Controllers and with Active Humidity Controller to ensure the best environmental control for live cell imaging.

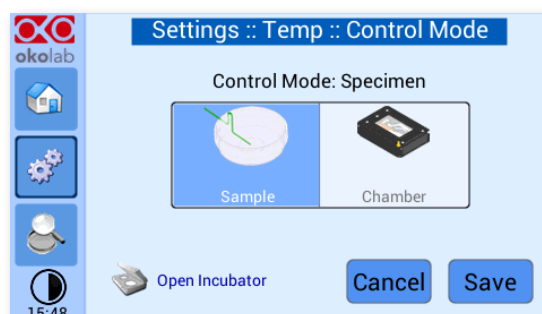
H301-T-UNIT-BL-PLUS has five independent temperature channels:

- Chamber base
- Chamber lid
- Objective heater
- Sample temperature sensor
- Room temperature sensor



### **Features:**

- Temperature accuracy:  $\pm 0.1^\circ\text{C}$  in sample feedback mode and  $\pm 0.3^\circ\text{C}$  in chamber feedback mode, if room temperature is stable within  $\pm 1^\circ\text{C}$
- Operated through OKO-TOUCH
- Automatic calibration routines
- Intelligent algorithm for fast thermal recovery after opening the chamber



OKO-TOUCH interface

## **INCUBATING CHAMBER**

All incubating chambers include the following components:

- Chamber main body
- Chamber heated lid with embedded temperature sensors
- Magnetic interchangeable inserts with magnetic sample fixing tools
- Removable chamber riser to reduce the height of the chamber
- Perfusion holes for inlet and outlet of tubes
- Optional lids available



## GAS CONTROLLERS

The Bold Line Top Stage Incubator can be equipped with Bold Line gas controllers and with the Active Humidity controller.

Bold Line gas controllers feature:

- 0.1% accuracy and repeatability
- Digital CO<sub>2</sub> and O<sub>2</sub> sensors
- Operated via OKO-TOUCH
- Compatible with Smart Box



### Technical specifications:

	CO <sub>2</sub>		O <sub>2</sub>		Output Flow Rate l/min
	Range, %	Accuracy, ±%	Range, %	Accuracy, ±%	
CO <sub>2</sub> -UNIT-BL	0-18	0.1	-	-	0.1 - 0.8 (0.4 with OKO-AIR-PUMP-BL)
CO <sub>2</sub> -O <sub>2</sub> -UNIT-BL [0-10;1-18]	0-10	0.1	1-18	0.1	0.2 - 0.8 (0.4 with OKO-AIR-PUMP-BL)
CO <sub>2</sub> -O <sub>2</sub> -UNIT-BL [0-20;1-95]	0-20	0.2 at 5% CO <sub>2</sub> *	1-95	0.3 at 5% O <sub>2</sub> *	*

\*Depends on the required gas concentrations. Please refer to [www.oko-lab.com](http://www.oko-lab.com) for detailed specifications.

## TOUCH SCREEN INTERFACE

OKO-TOUCH is a user friendly 4.3" touch screen interface required to operate Bold Line controllers.

One OKO-TOUCH can control multiple Bold Line controllers.



## HUMIDITY MODULE

HM-ACTIVE is a humidity controller equipped with a humidity sensor.

The HM-ACTIVE controls gas relative humidity with a resolution of 1%. The operating thermal range is 25 - 50 °C. Dry gas is humidified by flowing over warm water. A heated tube delivers the humid gas to the top stage chamber, preventing moisture condensation.

Operated through OKO-TOUCH.

## SMART BOX

The Smart Box connects to the Bold Line controller and provides the following features:

- Data logging
- Remote operation of the incubator via internet, tablet or smart phone
- Video streaming server
- Remote assistant





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