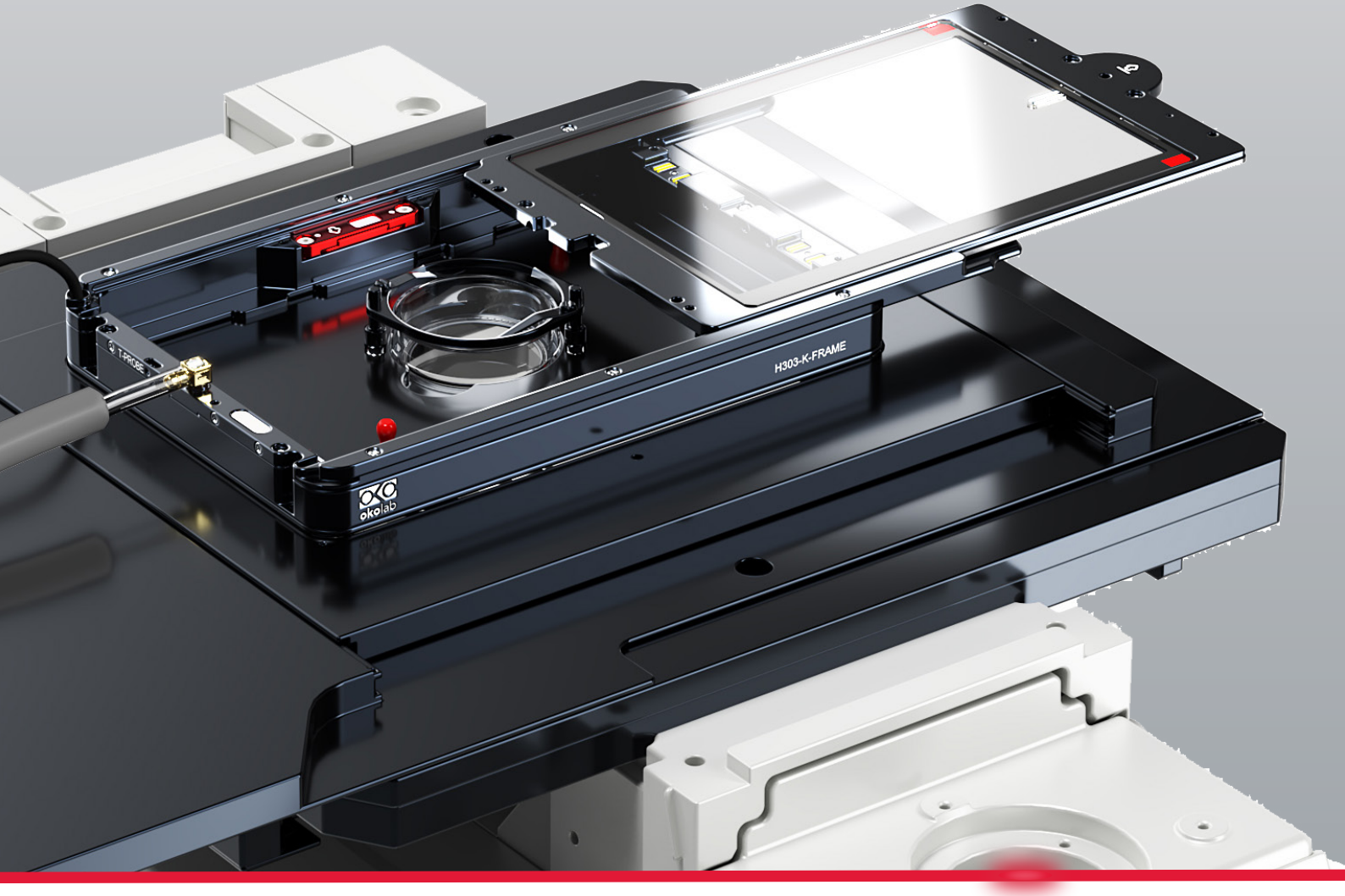
BOLD LINE 3

The first and **ONLY** microscope incubator
with **COMPLETE** sample-level feedback

- CO_2
- Humidity
- Temperature



okolab

BL3 STAGETOP INCUBATOR

Unbeatable performance with a unique
Error-Proof Workflow

the **MICROSCOPE INCUBATION EXPERTS**

BOLD LINE 3

STAGETOP INCUBATOR

Re-creates and stabilizes the experimental environment directly on the microscope stage.

Designed for versatility and accuracy, it maintains accurate and stable temperature, gas concentration, and humidity, ensuring reproducible results even during long imaging sessions.

The BL3 is the first microscope incubation solution to provide closed-loop feedback control of temperature, humidity, and gas composition at the sample level, ensuring higher experimental reliability, lower gas consumption and error-proof workflows.

MULTICHANNEL TEMPERATURE CONTROLLER

Independent control and monitoring of 5 channels:

- main chamber body
- heated glass lid
- objective heater
- sample temperature sensor
- room temperature sensor

- Choose between Sample Feedback or Chamber Feedback modes.
- Temperature accuracy: ± 0.1°C in Sample Feedback mode, ± 0.3°C in Chamber Feedback mode.
- Unique ambient temperature monitoring ensures consistent chamber feedback accuracy even under changing environmental conditions.
- Temperature range from 3°C above ambient to 60°C.
- Pairs with BL3 gas mixer via a cable-free connector.

GAS MIXERS - CO2 OR CO2/O2

Digital gas mixers connect to the temperature unit and share the same touch screen interface.

- Use high quality, drift-free gas sensors.
- CO2 sensor: non-dispersive infrared (NDIR) two-wave-length detector.
- Oxygen sensor (Hypoxia model): optical oxygen sensor.
- Hyperoxia model uses drift-free mass flow controllers.
- Adjustable output flow rate.
- Programmable CO2/O2 cycles.
- Air can be supplied via Okolab's convenient Air Pump (output flow range: 0-0.4 l/min), or using compressed air cylinder or house air (output flow range up to 1 l/min).

Available Gas Options	in-chamber sensor compatible	CO2		O2		Output Flowrate (l/min)	Expected Gas Sensor Lifetime
		Range, %	Accuracy, %	Range, %	Accuracy, %		
H303-T-H-CO2	YES	0 - 20	0.1	-	-	0.05 – 1.0*	≥10 years
H303-T-H-CO2/O2 [0-21]	YES	0 - 20	0.1	0 - 21	0.1	0.2 – 1.0*	≥10 years – CO2 ≥5 years – O2
H303-T-H-CO2/O2 [0-95]	NO	0 - 20	0.2 at 5% CO2	0 - 95	0.2 at 5% O2	Depends on O2 set-point	MFC
For premixed gas							
HM-ACTIVE-STANDALONE-BL3							

**Max flowrate is 0.4 L/min if using the air pump. Min flowrate is 0.2 L/min if using the CO2-H-IN-CHAMBER-SENSOR*

INCUBATION CHAMBER

- Models available for all XY stages/piezos on the market.
- **NEW Wireless Heated Sliding Lid – low profile for Koehler compatibility.**
- Removable riser to adjust chamber height.
- Can accommodate multi-well plates without additional inserts.
- Universal sample holders can be combined with a simple adapter for use in the XY stage/piezo without incubation.
- Perfusion holes for inlet and outlet of microfluidic tubes.
- Specialized microfluidics riser is optionally available.
- Removable riser adjusts the chamber's height.

TOUCH SCREEN INTERFACE

- **One-touch control** of all environmental parameters from a single intuitive touchscreen panel, powered by intelligent software that automatically regulates the system.
- User friendly control of all parameters from a single intuitive touch screen panel.
- Real time monitoring and feedback for all the key environmental parameters.
- On board memory – download experimental metadata via USB.

ACTIVE HUMIDITY CONTROLLER

- Controls relative humidity inside the stagetop chamber in the range 50% to 95% at 37°C.
- Choose the preferred humidity level in 1% increments easily, using the OKO-TOUCH interface.
- Digital humidity sensor provides active feedback.
- External humidity module – **NO water moat.** Keeps water safely away from your microscope.
- Water heater humidifies the gas mixture.
- Tube heater prevents condensation and maintains humidity level between water heater and chamber.
- Connects to any Bold Line 3 digital gas mixer.

OBJECTIVE HEATER

Minimize the temperature gradient caused by contact with a cold objective.

- Automatic software calibration routine determines the optimal temperature settings to achieve the highest thermal accuracy at the sample while preventing lens overheating.
- Controlled via user-friendly touchscreen panel.
- Available in 3 different sizes.
- Easy to place around the objective.

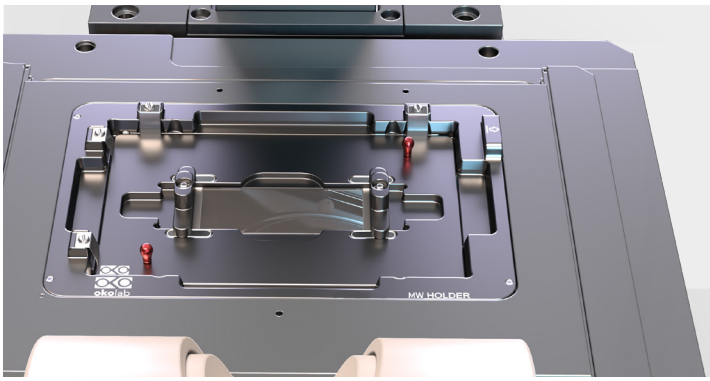
COMPLETE T/H/CO2 SAMPLE LEVEL FEEDBACK

The CO2-H-IN-CHAMBER-SENSOR (optional) increases experimental reliability, reduces gas consumption and makes the BL3 stagetop incubator error-proof.

Closed-loop feedback corrects deviations caused by changes in experimental conditions and alerts the user before the experiment starts if a setup error is detected. Monitoring continues throughout the entire experiment.

Typical errors detected: open lid, disconnected tubes, low flow, low humidity water level, unsecured sample slots.

SET IT. RUN IT. TRUST IT. No surprises the next morning.



NEW UNIVERSAL INSERTS

Convenient design allows our sample inserts to be used outside of our chambers as standard, universal sample holders for fixed sample imaging. They fit on virtually any microscope stage that's equipped with a MW plate holder.

3 YEARS WARRANTY

CONTINUED QUALITY

YOU CAN COUNT ON OKOLAB!

Built on 20+ years of incubation expertise and backed by an exclusive 3-year warranty.

oko-lab.com

Rev03 - MARCH 2026 - All information correct at time of print. Specifications are subject to change without notice or obligation on the part of the manufacturer.