

# okolab

## TRI-GAS MIXER

The Tri-Gas Mixer supplies the desired  $\text{CO}_2$ - $\text{O}_2$  mixture at controlled pressure. It is the ideal device to feed multiple mini incubators for IVF applications.

Compatible with any mini incubator on the market.

Available models with max flow rate of 1.5 L/min (Tri-Gas Mixer 1.5 LPM) or 15 L/min (Tri-Gas Mixer 15 LPM).

Output flow rate self-adjusts to match the requirements of the connected mini incubator.

Required input gases: Air,  $\text{CO}_2$  and  $\text{N}_2$ .

Adjustable output pressure in the range 0-2 bar (0-30 psi).



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### ACCURATE



$\text{CO}_2$ - $\text{O}_2$  sensors provide continuous feedback.  
Accuracy  $\pm 0.1\%$

### SAFE



Automatic switch over to back-up gas cylinder upon alarm

### CONNECTED



Data logging and remote control with OKO-3-GAS app

## PRODUCT DESCRIPTION

The Tri-Gas Mixer delivers gas mixture of the desired CO<sub>2</sub> and O<sub>2</sub> concentration with output pressure in the range of 0-2 bar (0-30 psi). Delivery pressure is easily regulated by adjusting the knob of the embedded pressure gauge.

The device is equipped with a mixing tank to ensure the highest composition stability even when the required output flow is variable.

Models available with maximum output flow rate of 1.5 L/min and 15 L/min. The actual flow rate delivered automatically adjusts to match the requirements of the equipment connected.

The Tri-Gas Mixer is compatible with any mini incubator available on the market.

## GAS INPUT REQUIREMENTS

The Tri-Gas Mixer must be connected to pressurized sources of CO<sub>2</sub> - N<sub>2</sub> - Air. Minimum input pressure is related to the desired delivery pressure according to  $P_{\text{input}} = P_{\text{output}} + 1.3 \text{ bar}$  (20 psi).

Okolab air compressors are available to provide pressurized background air.

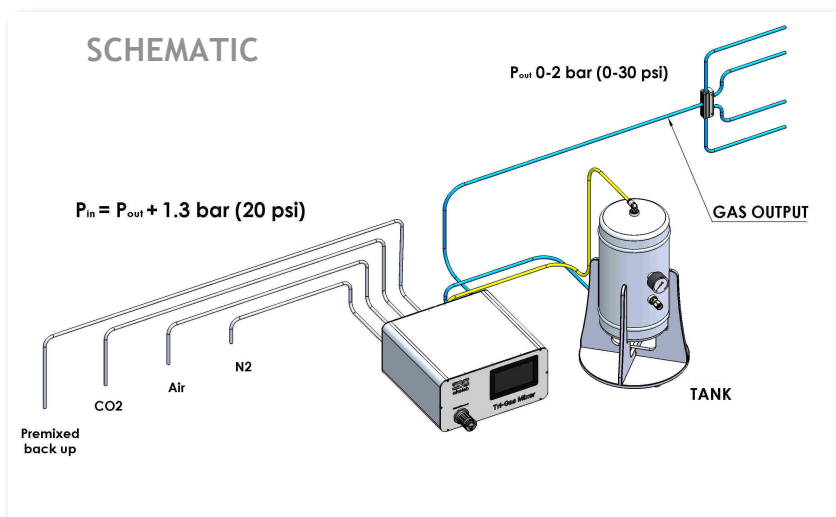
## SAFETY FEATURES

The Tri-Gas Mixer features advanced safety routines to ensure that the incubators always receive the proper gas.

To enable the safety routines the Tri-Gas Mixer must also be connected to a pre-mixed back-up cylinder containing gas of the desired concentration.

The mixer will automatically switch to the backup pre-mixed cylinder if any of the following condition occurs:

- pressure in the mixing tank becomes too low (for instance due to gas requirement exceeding maximum mixer capacity).
- pressure of any of the input gasses becomes too low.
- target gas concentration cannot be achieved.



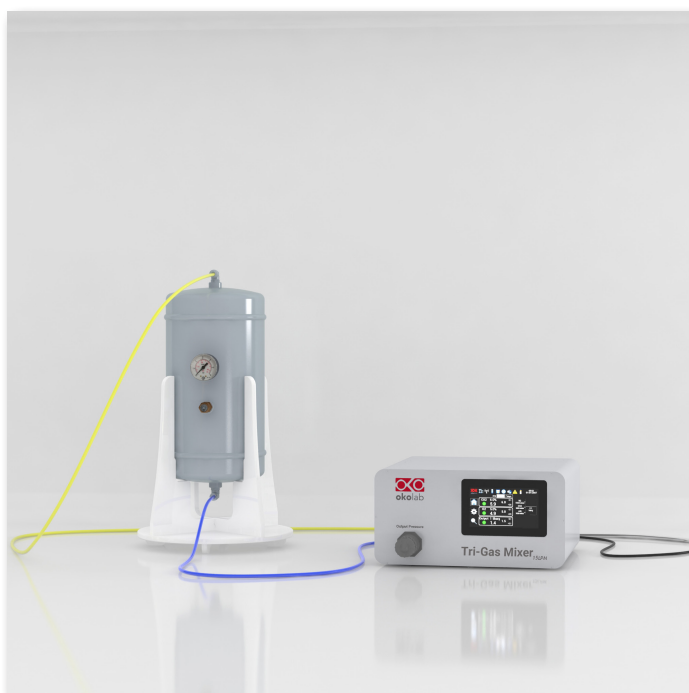
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## AVAILABLE MODELS

The Tri-Gas Mixer is available in two models, with maximum output flow rate capacity of 1.5 and 15L/min. Besides internal components, the two models differ by the size of the mixing tank (specs in the back of this brochure).

TRI-GAS MIXER 1.5LPM

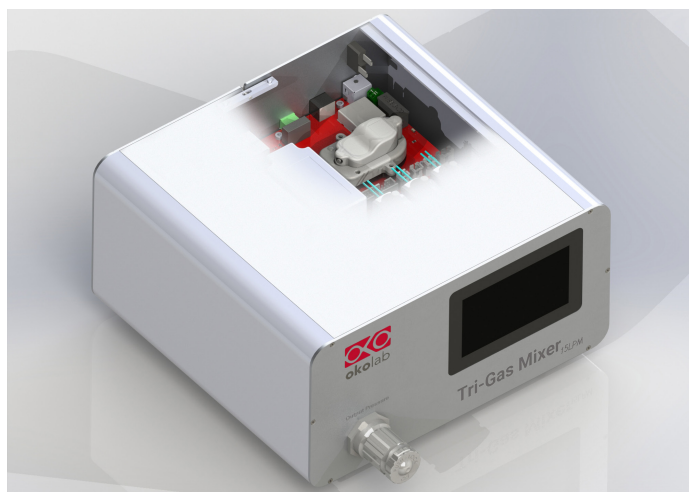


TRI-GAS MIXER 15LPM



## CO<sub>2</sub>-O<sub>2</sub> SENSOR CALIBRATION

The CO<sub>2</sub>-O<sub>2</sub> sensor module stores the calibration in local memory. The CO<sub>2</sub>-O<sub>2</sub> sensor module can be conveniently calibrated on-site with intuitive routines or can be easily extracted from the Tri-Gas Mixer, replaced with a spare CO<sub>2</sub>-O<sub>2</sub> sensor module and sent out for calibration. In both cases, there is no need to disconnect or turn off the Tri-gas Mixer nor to discontinue the gas supply to the incubators.





FEATURES	TRI-GAS MIXER 1.5 LPM	TRI-GAS MIXER 15 LPM
Output maximum flow rate	1.5 L/min	15 L/min
Output pressure	0-2 bar (0-30 psi) regulated with embedded pressure gauge	
CO <sub>2</sub> range	0-10%	
CO <sub>2</sub> accuracy	±0.1%	
CO <sub>2</sub> sensor	Non Dispersive InfraRed (NDIR) dual wave length detector. Expected lifetime 10 years	
O <sub>2</sub> range	0-10%	
O <sub>2</sub> accuracy	±0.1%	
O <sub>2</sub> sensor	Optical Oxygen Sensor. Expected lifetime 5 years	
Air compressor	AIR-COMPRESSOR-1.5L	AIR-COMPRESSOR-CP3-15L
Mixer dimensions	270x140x325 mm	
Mixing tank size	4L	40L
Input gas	CO <sub>2</sub> , N <sub>2</sub> , air @ 1.3 bar (20 psi) above output pressure	
Input gas connectors	stainless steel ¼" tube fittings	
Switch over to backup cylinder	✓	✓
On board memory	✓	✓
Okolab CP3 app	✓	✓