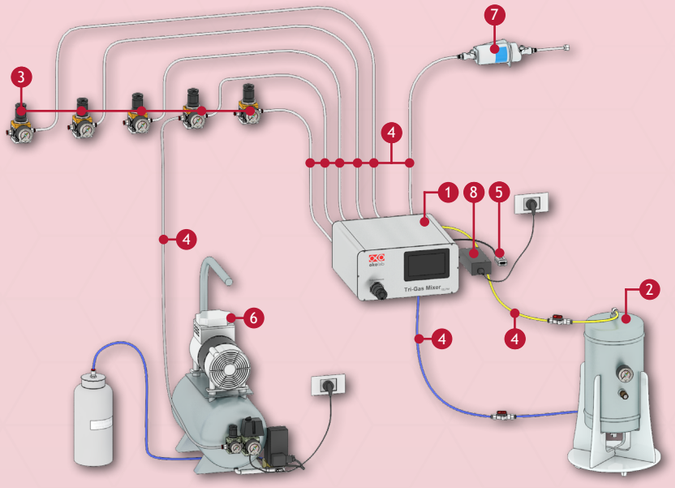

The Tri-Gas Mixer includes:

1. Tri-Gas Mixer
2. Mixing Tank
3. Pressure gauges for CO2, N2, Air, Pre-Mixed back-up gas and Calibration gas.
4. Gas tubing
5. Analog output cable
6. Air compressor *(optional)*
7. VOC filter *(optional)*
8. Power supply

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Tri-Gas Mixer

Control, safety, and accuracy.

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Accurate

Safe

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Tri-Gas Mixer

The Tri-Gas Mixer is a digital CO2-O2 controller that mixes CO2, Air and N2 to the desired concentration ranging between 0-10% for both CO2 and O2, and at controlled pressure in the range of 0-2 barg (0-30 psig). 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.

The Tri-Gas Mixer is compatible with any bench-top incubator available on the market. Models are 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 connected equipment.

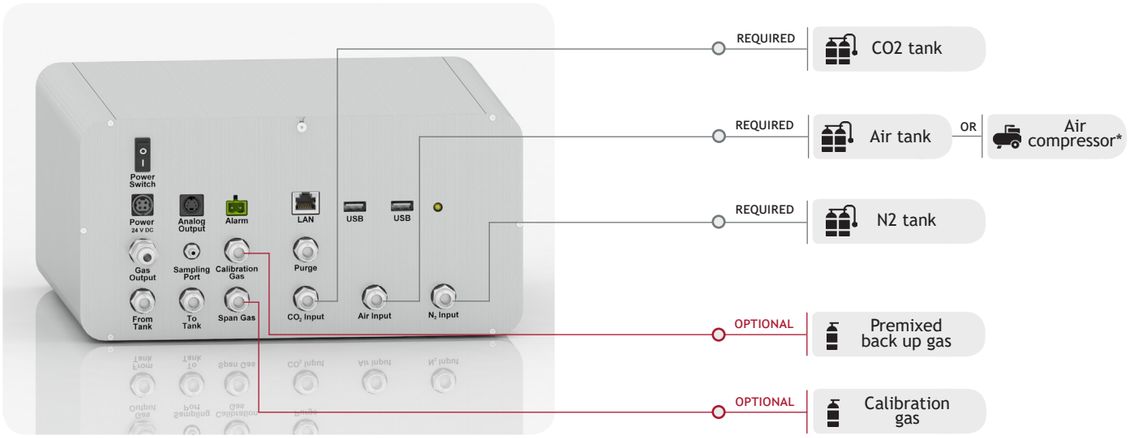
TRI-GAS-MIXER-1.5L

TRI-GAS-MIXER-15L

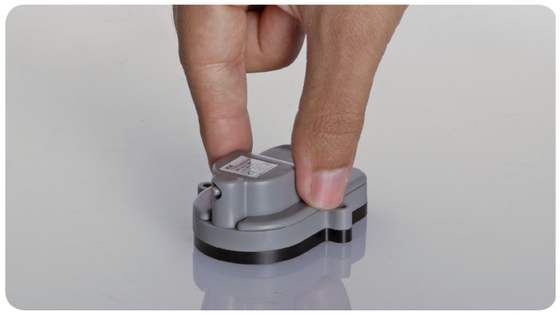
The Tri-Gas Mixer features:

- User-friendly 4.3” touch screen interface
- On board memory for data logging
- Auto calibration with an external calibration gas
- Automatic switch to backup cylinder upon alarm
- 0-10 V or 0/4-20 mA analog output linear with the actual gas composition, for remote monitoring with an external data logger
- Contact closure alarm
- Auto diagnostic procedure
- Web app allows:

- Remote access by user password
- Alarm alert through email
- Remote Data access
- Data history tables and charts



*Okolab air compressors are available.



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 premixed backup cylinder containing gas of the desired concentration. Thanks to the integrated sensors, the mixer will automatically switch to the premixed backup 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.

CO2-O2-MODULE

The Tri-Gas Mixer is equipped with a CO2-O2-Module, which contains the CO2 and O2 sensors. The CO2-O2 Module measures with a high accuracy the CO2-O2 volume concentrations allowing automatic fine-tuning of the output gas.

The CO2-O2-MODULE is factory calibrated using certified gas cylinders, and the factory calibration certificate is included in electronic format.

Self Calibration

The Tri-Gas Mixer features the Self Calibration procedure to ensure that the incubators receive gas with highest accuracy.

To enable the Self Calibration routines, the Tri-Gas Mixer must also be connected to a Calibration Gas with a gas concentration close to the concentration used during the standard working condition.

The Self Calibration routines run in background and periodically calibrate the CO2 and O2 sensors. If desired, the routines can be manually started at any time with an intuitive procedure.

Technical specifications:

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 barg (0-30 psig) regulated with embedded pressure gauge	
CO_2 range	0-10%	
CO_2 accuracy	±0.1%	
CO_2 sensor	Non Dispersive InfraRed detector (NDIR)	
O_2 range	0-10%	
O_2 accuracy	±0.1%	
O_2 sensor	Fluorescence-based optical	
CO2-O2-MODULE lifetime	5 years	
Air compressor	AIR-COMPRESSOR-1.5L	AIR-COMPRESSOR-CP3-15L
Mixer dimensions	270x140x325 mm	
Mixing tank size	5L	40L
Input gas	CO2, N2, air @ 1.4 barg (20 psig) above output pressure**	
	Calibration Gas @ 2.0 barg (29 psig)	
	Premixed backup gas @ 0.2 barg (3 psig) above output pressure***	
Input gas connectors	Push to fit*	
Output gas connector	Stainless steel ¼” compression tube fittings	
Switch over to backup cylinder	✓	✓
On board memory	✓	✓
Okolab CP3 app	✓	✓

** Tubes and connectors are 6 mm OD in Countries using metric system, ¼ inch in the US and Countries using imperial system.*
*** Set at 2.4 barg if the output pressure is ≤ 1 barg.*
**** Set at 0.2 barg above output pressure if the output pressure is ≤ 1 barg.*