PhO_2x Box

Culture as nature intended

Baker

PhO_2x Box gas-controlled cell culture chamber

Entry level solution for physoxia and hypoxia experiments

The PhO_2x Box system is comprised of a Gas Controller unit (offering O_2 and CO_2 control) and a Cell Culture Chamber.

The Cell Culture Chamber is placed inside any incubator or workstation for temperature control, or on a lab bench for room temperature applications. PhO_2x Box offers experimental flexibility and precision atmosphere within your existing laboratory infrastructure.

Baker's PhO_2x Box is a novel, easy to use and economical Physoxia/Hypoxia system designed for *in-vitro* cell culture experiments

Our Baker Grow solutions are packed with new, innovative features that allow you to study even the most complex cell interactions under perfect physiological oxygen conditions. Whether you're hoping to replicate the environment of blood vessels or lung tissue, Baker provides the best tools for the job.

Pho$_2$x Box included features

GAS CONTROLLER

- Controls and monitors O_2 and CO_2 levels with a single touchscreen
- Intuitive touchscreen with large font number display
- Small footprint (325mm wide x 298mm deep)
- Easy user set up, takes around 10 minutes
- Only needs N_2 and CO_2 cylinders for operation
- 2 year warranty for peace of mind

CULTURE CHAMBERS

Your choice of 4 types of cell culture chamber. Each is gas tight, has removable shelving and is easy to clean.

- Black (light reducing) - small and large
- Clear – small and large

TOUCHSCREEN CONTROL

- O_2 control (from 0.1% to 20.0% in 0.1% increments)
- CO_2 control (from 0.1% to 20.0% in 0.1% increments)
- Hypoxic cycling
- Temperature display (of Cell Culture Chamber)

AUDIBLE ALARMS

- Low gas (either CO_2 or N_2)

DATA LOG

- Up to 12 months data history
- One data set stored per minute, each data set comprises: Time, Date, O_2 (Set/Actual), CO_2 (Set/Actual)
- Stored on SD card provided

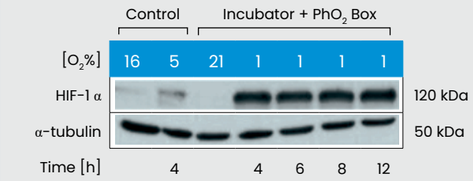


Figure 1. blot provided by PhD Daniela Mennerich, University of Oulu, Finland, showing proof of hypoxic conditions in the PhO$_2$x Box inside a standard CO_2 Incubator.

CULTURE CHAMBER DIMENSIONS

		Small (Black or Clear) Chamber		Large (Black or Clear) Chamber	
		mm	inches	mm	inches
External dimensions	Width	335	14	355	14
	Height	173	6.8	238	9.4
	Depth	369	14.5	369	14.5
Internal dimensions	Width	335	13.2	335	13.2
	Height	140	5.5	205	8.1
	Depth	280	11	280	11
	Volume	13.1 Litres		19.2 Litres	
Workstation capacity-96 well plates	Number of plates (128mm x 86mm x 17mm	8 plates of shelf, (4 stacks of 2 plates high on shelf)		24 plates, (4 stacks of 2 plates high per shelf, 3 shelves)	
Number of flasks (150mm x 80mm x 86mm)	Number of flasks (150mm x 80mm x 86mm)	6 (on shelf)		18 (6 on each shelf)	
PhO_2x Box System	Kgs/Lbs	5.5Kg/12.1 lbs (chamber) & 5.5 kg/12.1 lbs (controller)		6.5 kg/14.3 lbs (chamber) & 5.5kg/12.1 lbs (controller)	

Usable Internal Volume: 13.1 litres (Small Chamber) | 19.2 litres (Large Chamber)

		mm	inches
Gas Controller External dimensions	Width	325	12.8
	Height	238	9.4
	Depth	298	11.7

PERFORMANCE DATA

	Gas Type		Coefficient of Variation (based on >700 readings)	
	O_2%	CO_2%	O_2%	CO_2%
Settings on Controller	0.1	5	<8%	<5%
	1	5	<5%	<5%
	5	5	<2%	<5%

PERFORMANCE DATA AT DIFFERENT GAS LEVEL SETTINGS

	0.1% O_2 / 5.0% CO_2	
	O_2%	CO_2%
Mean	0.1	5.0
%CV	6.7	2.2

	1% O_2 / 5.0% CO_2	
	O_2%	CO_2%
Mean	1.1	4.9
%CV	7.9	1.9

	5% O_2 / 5.0% CO_2	
	O_2%	CO_2%
Mean	5.1	4.9
%CV	1.3	1.6

Additional specifications

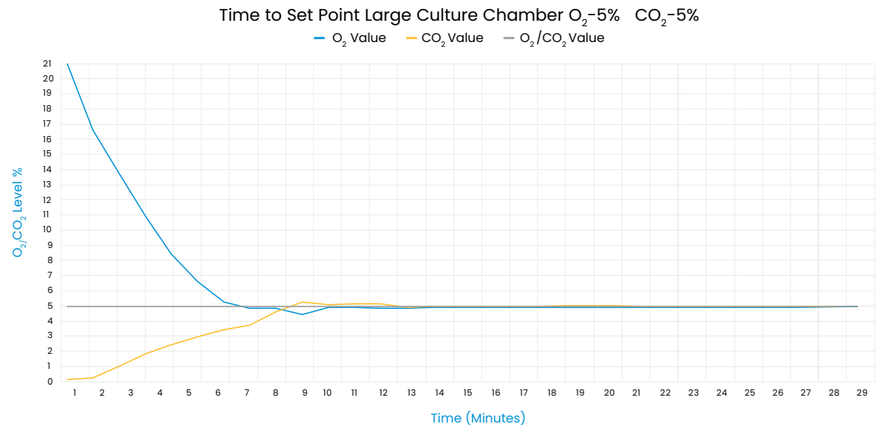
ACCESSORIES

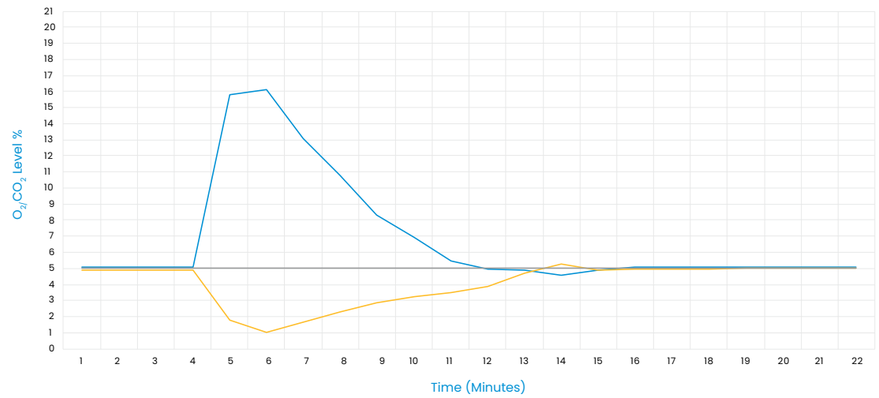
- Anoxic/Anaerobic operation using palladium catalyst and special gas mix
- Single cable gland (must be factory fitted)
- Gas Sample Port
- Stand-alone O_2 meter for validation

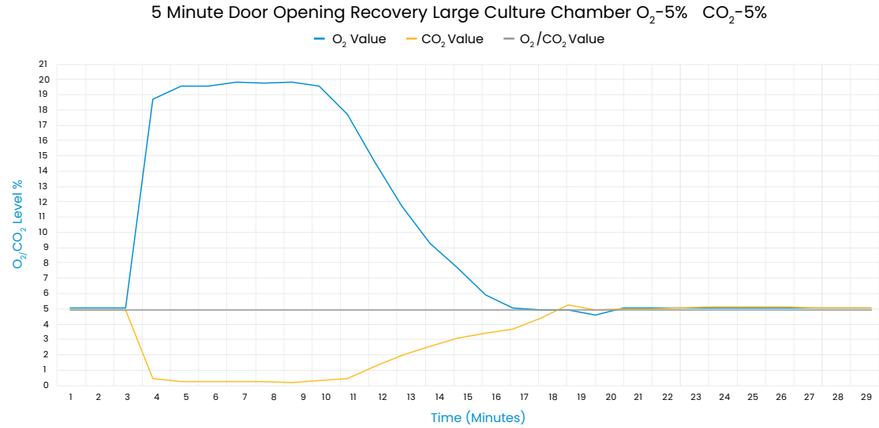
POWER SPECIFICATIONS

- Voltage: 100 Volts to 240 Volts AC
- Power: 15 Watts
- 130kWh/Year (Based on 24 / 7 / 365)

When inside a workstation, the PhO_2x Box provides a second, independently controlled atmosphere for experimental flexibility.







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