

# VWR® CO<sub>2</sub> Incubator ILCO Premium



# Optimum growth conditions for cell cultures

## VWR® ILCO 180 AND ILCO 260 PREMIUM IS AN EXCELLENT CHOICE!

Both models offer optimum growth conditions for cell cultures thanks to very precise temperature control and optimal humidity. Featuring hot-air sterilization at 180°C, no hiding spaces for potential contaminants, fan-less construction, a smooth, easy to clean stainless steel interior and a sterilizable, drift-free IR CO<sub>2</sub> sensor.

The incubator has a solid outer door, an internal glass door and a stainless steel (DIN 1.4301) inner chamber. It is equipped with a rack for shelves, a removeable water pan, two Ø 30 mm access ports (left and rear) and a door lock.

The VWR® PREMIUM models have an intuitive menu and user-friendly software, a USB port for downloading data to a USB stick and for uploading programs. It can be connected to Ethernet or Wi-Fi networks enabling remote control from any computer and users can receive notifications about selectable parameters via e-mail.



Thanks to the smooth chamber interior and fan-less technology the chamber is easy to clean and cell cultures are safe from contamination.



The state-of the art, 7" full colour touch screen controller with GLP supporting functionality is intuitive and very easy to use.



- 1 USB port for downloading data and uploading programs
- 2 Handle with key lock convenient door locking
- 3 7" full colour touch screen provides easy control
- 4 Main power switch incorporated in housing prevents unintentional switch off
- 5 CO<sub>2</sub> gas-mixing jet with Venturi effect, ensures quicker atmosphere mixing and more homogeneous distribution
- 6 Multiple temperature sensors assist accurate measurement
- 7 Magnetic handle for ergonomic internal door opening

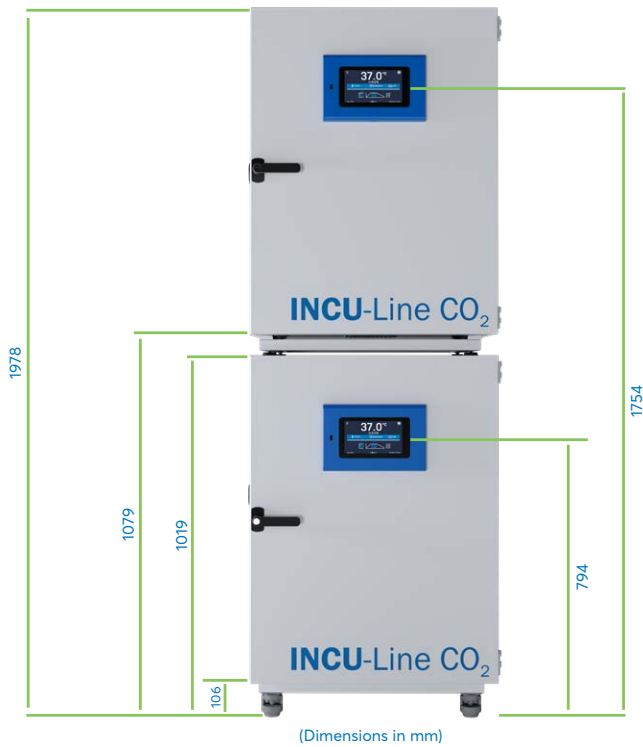
- 8 Smooth stainless steel interior with rounded corners enables easy cleaning
- 9 Perforated shelves allow optimised air flow
- 10 Open door sensor
- 11 Sterilizable, drift-free infrared CO<sub>2</sub> sensor gives reliable atmosphere control
- 12 Rack for shelves leads to optimal shelf positioning
- 13 Access port (Ø30 mm) for external sensors
- 14 Inner glass door allows a quick overview
- 15 Silicone gasket
- 16 Water pan provides optimal humidity
- 17 Height adjustable feet



### TWO ACCESS PORTS

The VWR ILCO Premium is unparalleled in the market as the unit is equipped as standard with two Ø30 mm access ports. One port is located on the left wall and other at the rear of the chamber. Both are secured with silicone plugs and can be used to insert external sensors.

The access port at the rear is ideal for laboratories where several units are placed side by side. Alternatively, the second access port on the side wall will be favoured by laboratory technicians and users in smaller laboratories where space is limited and it is not convenient or practical to access the rear of the unit (e.g the incubator is positioned close to the wall). The VWR ILCO incubator will meet the requirements of every user!



### STACKABLE UNIT - SAVE SPACE IN YOUR LABORATORY

The VWR® ILCO 180 and ILCO 260 Premium is stackable. Two units can be stacked on top of each other with the stacking adaptor, saving valuable space in the laboratory.

The stacking adaptor prevents heat transmission, shocks and vibrations transferring from one chamber to another.

The base on castors allows the incubator to be easily moved from one location to another. It is also recommended to avoid dirt from the floor potentially contaminating the chamber.

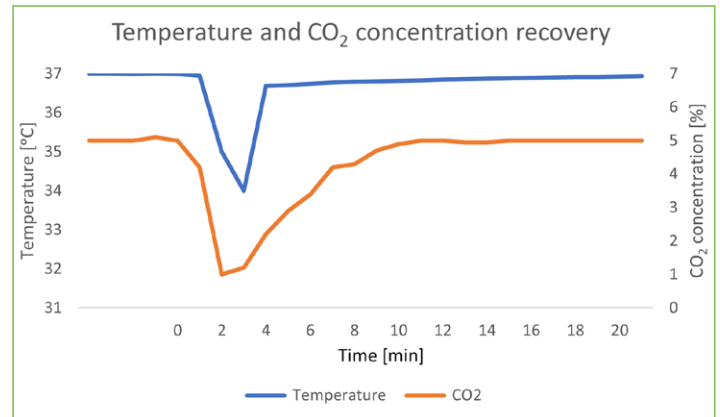
Even when two units are stacked and placed on the base on castors, the upper display is at height of 1,75m for ILCO 180 / 2,06m for ILCO 260 and very convenient to operate.

### OPTIMIZED GROWTH CONDITIONS

The VWR® ILCO Premium provides optimal atmosphere for cell growth. To ensure optimal cell growth at different positions inside the incubator, the atmosphere must be uniform throughout the chamber. After opening the door, the conditions in the chamber recover quickly back to the set points while avoiding significant overshoot.

### VIBRATION AND TURBULENCE PROTECTION

The VWR® ILCO Premium does not have a fan inside the chamber. This avoids possible air turbulence and vibrations being transmitted to the samples, disrupting the micro-atmosphere and contributing to uneven cell growth.

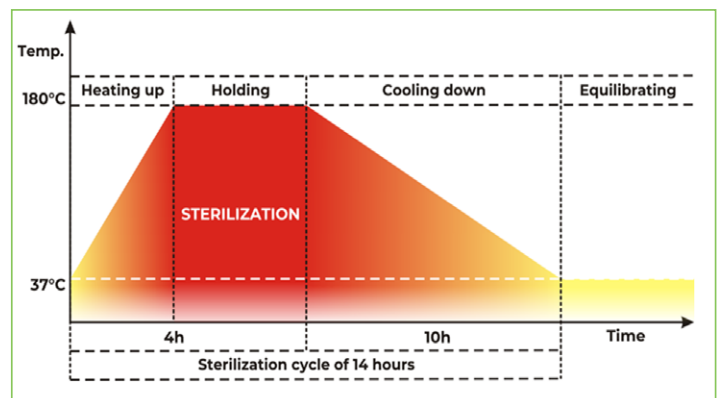


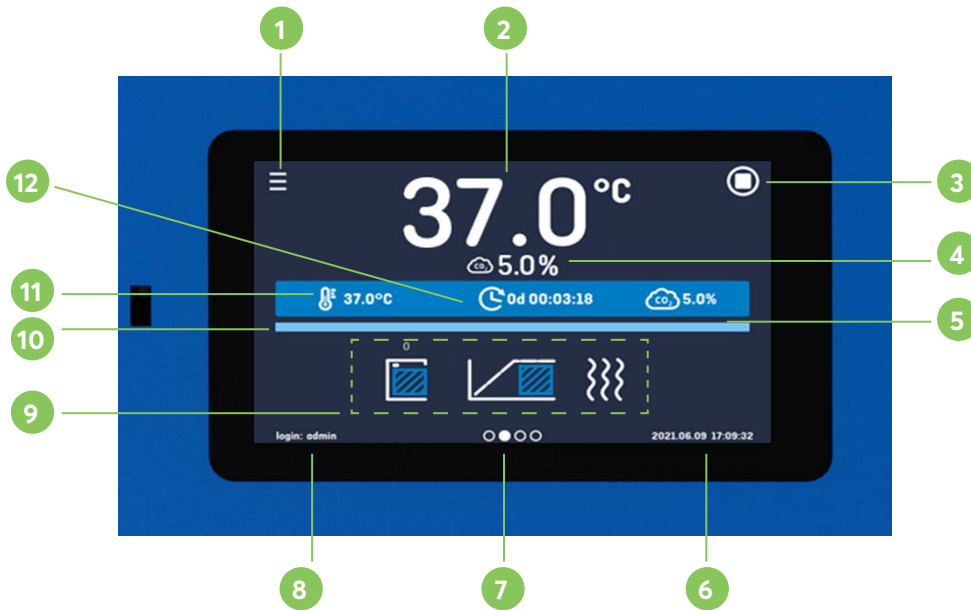
Recovery time for temperature and CO<sub>2</sub> concentration after door opening for 30 seconds (to reach 98% of set values).

### CONTAMINATION PROTECTION

The VWR® ILCO Premium allows cell cultures to be performed in a safe and reproducible way. The VWR® ILCO Premium is designed to provide reliable contamination prevention:

- chamber with natural air convection (fan-less construction)
- smooth, easy to clean stainless steel interior with rounded corners
- 180°C hot-air sterilization routine
- sterilizable, drift-free, infrared CO<sub>2</sub> sensor
- no hiding spaces for possible contaminants
- internal glass door for quick sample viewing without altering chamber conditions





- 1 Main menu
- 2 Current temperature
- 3 Start/Stop the program
- 4 Current CO<sub>2</sub> concentration
- 5 Set CO<sub>2</sub> concentration
- 6 Date and time
- 7 Active window panel
- 8 Logged-in user
- 9 Information panel
- 10 Alarm bar
- 11 Set temperature
- 12 Elapsed or remaining program time

## CONTROLLER

The VWR® ILCO Premium incubator is equipped with an innovative controller with a large (7") colour touch screen. It displays all important information about the program settings, current parameters, alarms and program status in a very clear, easy to understand way.

The controller was developed to be navigated using icons, so all information is legible, and programming the unit is extremely intuitive.

## ADVANTAGES OF THE PREMIUM CONTROLLER:

- multi-segment time and temperature profile with adjustable ramps
- overview of data in tabular and graphic form
- visual and audible alarm
- administration functions for easy management
- password protected log-in
- internal memory for programs and data storage
- event registry with user notifications
- LAN port, USB port and WiFi for communication and data transfer
- Premium Control software and instruction manual for direct download
- alarm bar - instant visual information about chamber status
- adjustable start delay feature and loop function
- over-temperature protection class 3.1 (DIN 12880) protects samples and the incubator

Premium controller touch screen can be operated with gloves!





### REMOTE CONTROL OF THE UNIT

VWR® ILCO Premium CO<sub>2</sub> incubator can be connected to the Ethernet network and controlled remotely using the Premium Control Software supplied. This software was designed to meet customers' needs to facilitate operation and control the VWR® PREMIUM models. Premium Control Software can be downloaded from unit's internal memory to a USB stick.

Application functionalities:

- simultaneously connect several PREMIUM units
- control units remotely
- overview of running program status
- save real-time running program data to the file
- alarm information
- option to create programs and upload them remotely
- modify existing programs
- create programs offline
- start / stop programs
- set a delayed start for a program
- overview of current temperature
- open registry data file / events downloaded from the unit
- generate reports / graphs from registry or events data file
- overview of current data statistics
- generate reports from current statistics
- download statistics of the launched program
- download registered data / events
- produce charts
- user management panel
- change time zone
- unit interface settings
- change temperature correction
- set alarms
- edit users

## Avantor Services

### Equipment Services

Our equipment services optimise your uptime, ensuring your equipment is fully compliant and performing to specifications. We offer:

#### Multi-vendor technical services

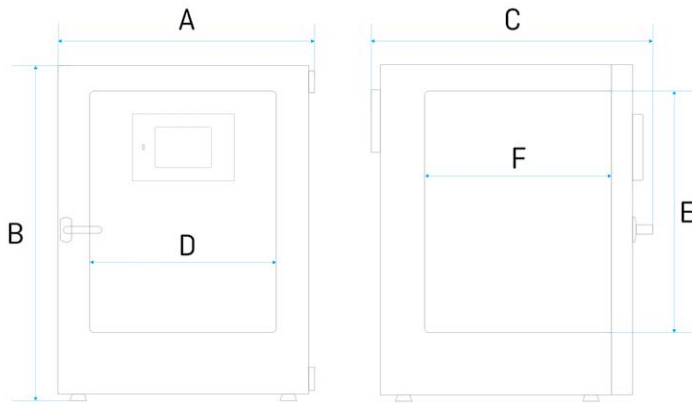
- Installation
- Repairs
- Relocation
- Calibration
- Validation
- Preventive maintenance
- Warranty

#### Asset management

 **avantor**™



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### DELIVERY INFORMATION

VWR® ILCO Premium is supplied with a rack for shelves, 3 stainless steel perforated shelves, a water pan, 2 keys to the lock, a pressure gas hose (length: 3 metres), hose clamp, Ethernet cable, manufacturer's test certificate at 37°C, multilingual instruction manual and the Premium Control Software (can be downloaded from the internal memory onto a USB stick).

Dedicated IQ/OQ documents and service contracts are available on request.

Model	Quantity	Cat. No.
VWR ILCO 180 Premium CO <sub>2</sub> incubator	1	390-1544
VWR ILCO 260 Premium CO <sub>2</sub> incubator	1	390-1690

### Accessories for ILCO 180

Description	Quantity	Cat. No.
Additional perforated stainless steel shelf (max. load 10 kg)	1	390-1545
Additional reinforced perforated stainless steel shelf (max. load 30 kg)	1	390-1640
Stacking adapter	1	390-1546
Base on castors	1	390-1547
Support frame on castors (Height: 800 mm)	1	390-1660
Replacement CO <sub>2</sub> gas filter	1	390-1593

### Accessories for ILCO 260

Description	Quantity	Cat. No.
Additional perforated stainless steel shelf (max. load 30 kg)	1	390-1691
Stacking adapter	1	390-1697
Base on castors	1	390-1692
Replacement CO <sub>2</sub> gas filter	1	390-1593



### TECHNICAL SPECIFICATIONS

Description	ILCO 180 PREMIUM	ILCO 260 PREMIUM
Air convection	natural (fanless)	
Chamber capacity (l)	182	262
Working capacity (l)	135	205
Door type	double (external solid, internal glass)	
Temperature range (°C)	+5°C above ambient temperature...+50	
Temperature resolution (°C)	every 0,1	
Humidity range (% rH)	90-95	
CO <sub>2</sub> range (Vol.-% CO <sub>2</sub> )	0-20	
CO <sub>2</sub> resolution (Vol.-% CO <sub>2</sub> )	every 0,1	
CO <sub>2</sub> measurement	IR	
Controller	microprocessor with a large 7" full colour touch screen	
Interior	stainless steel to DIN 1.4301	
Housing	powder coated sheet	
Overall dims <sup>2)</sup> (mm)	A width	700
	B height	920
	C depth	780
	D width	560
Internal dims (mm)	E height	650
	F depth	800
	F depth	500
Max shelf workload (kg)	10	30
Max unit workload (kg)	30	50
Nominal power (W)	1700	1700
Weight (kg)	96	118
Temperature fluctuation <sup>3)</sup> at 37°C (°C)	<±0,1	<±0,1
Temperature variation <sup>4)</sup> at 37°C (°C)	<±0,3	<±0,4
Recovery time after 30 second door opening at 37°C (min)	6	5
CO <sub>2</sub> recovery time after 30 second door opening at 5 Vol.-% CO <sub>2</sub> (min)	10	10
Energy consumption at 37°C (Wh/h)	66	97
Power supply	230V 50-60Hz	230V 50-60Hz
Sound level (db(A))	42	44
Shelves (std./max.)	3/6	3/8
Warranty	24 months	

1) doesn't include rack for shelves space

2) depth doesn't include 50 mm of power cable

3) fluctuation measured in centre of the chamber

4) in space, variation (K) calculated for chamber as:  $K = \frac{T_{max} - T_{min}}{2}$

# Setting science in motion to create a better world



## AUSTRIA

VWR International GmbH  
Graumannsgasse 7  
1150 Wien  
Tel.: +43 1 97 002 0  
info.at@vwr.com

## BELGIUM

VWR International bv  
Researchpark Haasrode 2020  
Geldenaaksebaan 464  
3001 Leuven  
Tel.: +32 (0) 16 385 011  
vwr.be@vwr.com

## CZECH REPUBLIC

VWR International s. r. o.  
Veetee Business Park  
Pražská 442  
CZ - 281 67 Stříbrná Skalice  
Tel.: +420 321 570 321  
info.cz@vwr.com

## DENMARK

VWR International A/S  
Tobaksvejen 21  
2860 Søborg  
Tel.: +45 43 86 87 88  
info.dk@vwr.com

## FINLAND

VWR International Oy  
Valimatie 17-19  
00380 Helsinki  
Tel.: +358 (0) 9 80 45 51  
info.fi@vwr.com

## FRANCE

VWR International S.A.S.  
Immeuble Estréo  
1-3 rue d'Aurion  
93114 Rosny-sous-Bois cedex  
Tel.: 0 825 02 30 30\* (national)  
Tel.: +33 (0) 1 45 14 85 00  
(international)  
info.fr@vwr.com  
\* 0,18 € TTC/min + prix appel

## GERMANY

VWR International GmbH  
Hilpertstraße 20a  
D - 64295 Darmstadt  
Tel.: 0800 702 00 07\* (national)  
Tel.: +49 (0) 6151 3972 0 (international)  
info.de@vwr.com  
\*Free call

## HUNGARY

VWR International Kft.  
Simon László u. 4.  
4034 Debrecen  
Tel.: +36 52 521130  
info.hu@vwr.com

## IRELAND

VWR International Ltd  
Orion Business Campus  
Northwest Business Park  
Ballycoolin  
Dublin 15  
Tel.: +353 (0) 1 88 22 222  
sales.ie@vwr.com

## ITALY

VWR International S.r.l.  
Via San Giusto 85  
20153 Milano (MI)  
Tel.: +39 02 3320311  
info.it@vwr.com

## THE NETHERLANDS

VWR International B.V.  
Postbus 8198  
1005 AD Amsterdam  
Tel.: +31 (0) 20 4808 400  
info.nl@vwr.com

## NORWAY

VWR International AS  
Brynsalleen 4,  
0667 Oslo  
Tel.: +47 22 90 00 00  
info.no@vwr.com

## POLAND

VWR International Sp. z o.o.  
Limbowa 5  
80-175 Gdansk  
Tel.: +48 58 32 38 200  
info.pl@vwr.com

## PORTUGAL

VWR International –  
Mat. de Laboratório, Soc.  
Unipessoal, Lda  
Edifício Ramazzotti  
Avenida do Forte 6, P-1.09 e  
P-1.10  
2790-072 Carnaxide  
Tel.: +351 21 3600 770  
Info.pt@vwr.com

## SPAIN

VWR International Eurolab S.L.U.  
C/ Tecnología 5-17  
A-7 Llinars Park  
08450 - Llinars del Vallès  
Barcelona  
Tel.: +34 902 222 897  
info.es@vwr.com

## SWEDEN

VWR International AB  
Esbogatan 16  
164 74 Kista  
Tel.: +46 08 621 34 20  
Email: info.se@vwr.com

## SWITZERLAND

VWR International GmbH  
Lerzenstrasse 16/18  
8953 Dietikon  
Tel.: +41 (0) 44 745 13 13  
info.ch@vwr.com

## UK

VWR International Ltd  
Customer Service Centre  
Hunter Boulevard - Magna Park  
Lutterworth  
Leicestershire  
LE17 4XN  
Tel.: +44 (0) 800 22 33 44  
uksales@vwr.com

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