



FreyGen ALF

IVFtech
for the next generation

Intended use of the incubator

The FreyGen ALF II incubator is designed to protect IVF samples by providing a stable, clean, and turbulence-free atmosphere with a constant temperature and controlled gas levels (premix gas or gas mixer setup). This incubator is thus designed to protect IVF samples from particle contaminants and non-optimal growth conditions.

The FreyGen ALF II incubator is meant to be used by professionals trained in performing IVF of embryos and in using the FreyGen ALF II incubator. The incubator is intended to be used at room temperature as a stand-alone equipment at IVF clinicals and laboratories.



The FreyGen ALF key features include:

Stable and safe embryo environment

Alarm feature – including possibility of external alarm monitoring

Datalogging feature

Dedicated gas sampling ports for each chamber

Clean environment ensured by HEPA & VOC filtered air stream

Very easy to replace the HEPA & VOC filter

Easy and intuitive touch screen user interface

Individual target settings for temperature

Easy offset adjustment (calibration) for temperature

Individually heated chambers – individually heated bottom and top pads for maximum temperature stability

The digital lid displays both lid and chamber temperature and can display patients details

Each chamber can accommodate 4 (60mm) Dishes or 8 (38mm) Mini Dishes. The trays/inserts can accommodate all major dish brands.

Medical grade sealing of each chamber protects the samples

Effortless cleaning due to advanced surface treatment of chambers – this ensures a spotless working environment

Low steady state power consumption

Preparation for external pH monitoring (optional)

Removeable trays/inserts for transportation and ease of cleaning.

Removable lids for ease of cleaning

Easy locking system



Easy and intuitive touch screen user interface

Overview of the touch screen menu

The incubator is controlled from the touch screen menu. An overview of the menu structure is illustrated below. The starting point of each arrow indicate the button that must be pressed to open the menu shown at the ending point of the corresponding arrow.

The menu consists of four screens:

“WORK”: Contains information about the currently measured values

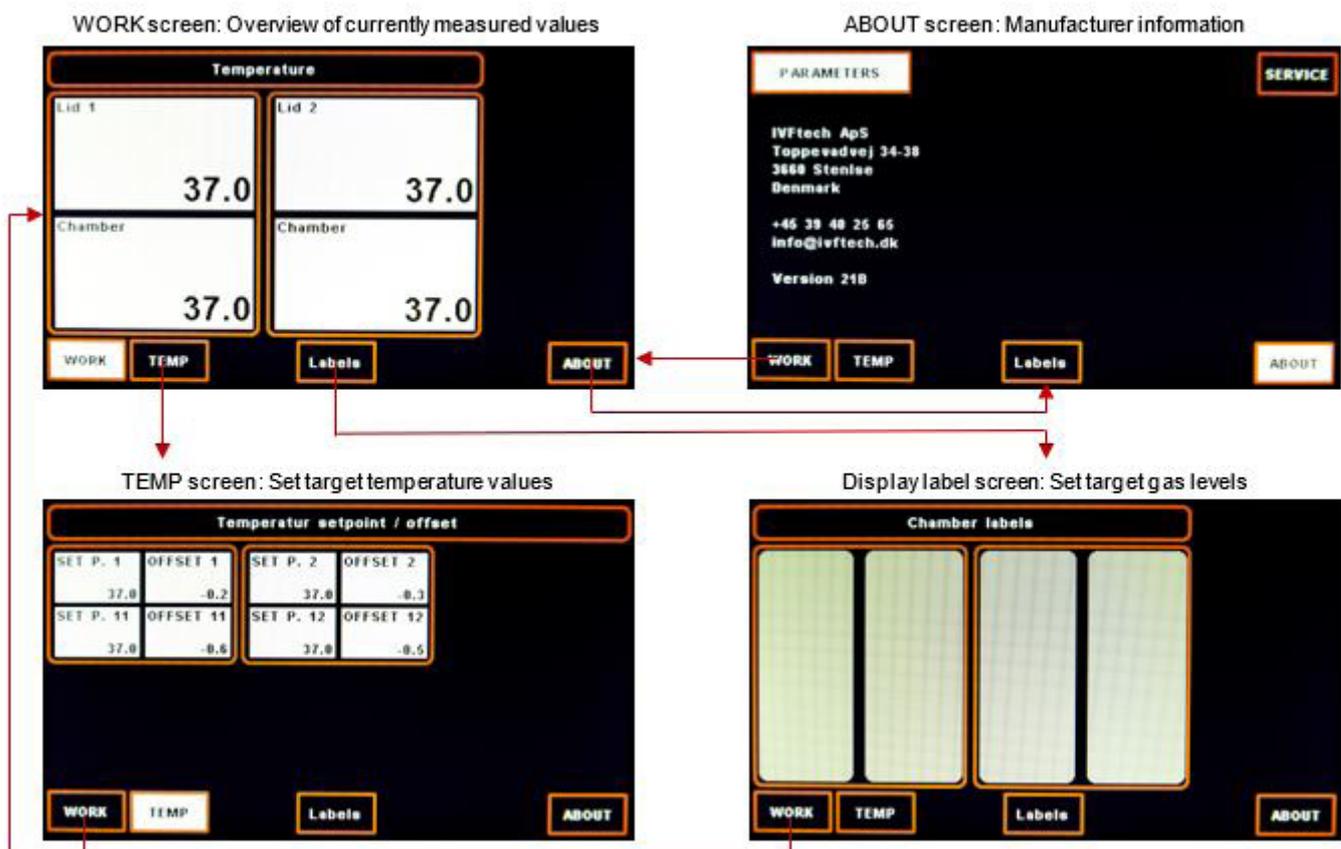
“TEMP”: Is used to set the target temperature values and calibrate the temperature sensors

“LABEL”: Is used to write individual labels in the lid displays

“ABOUT”: Provides the software version and IVFtech contact information

From any of the four screens, you can move to another screen by pressing the corresponding button in the bottom of the screen.

- The “TEMP” screen can be disabled. This ensures that the target settings and/or the offset calibrations are not changed unintentionally. The screen is disabled by pressing the “PARAMETERS” button in the “ABOUT” screen. Press this button again to enable the “TEMP” screen.
- The “SERVICE” button in the “ABOUT” screen requires a password and is only intended for authorized service technicians.



Description of the incubator

The FreyGen ALF II incubator consists of a metal frame and has two chambers that each can hold up to four IVF petri dishes (eight 35mm petri dishes with flat dish insert). Each chamber can be opened and closed using individual lids. Both the chambers and the lids are made of anodized aluminum and the chambers are sealed with a medical grade sealing to ensure optimal protection of the samples. Each lid has a scratch resistant glass cover and a display that shows temperature readouts for the individual chamber. Furthermore, the lid display can be configured to show user specific information, e.g. patient information.

The FreyGen ALF II incubator uses a premix gas that flows through the chambers and into the free air. As an option, the FreyGen ALF II can also be connected to a gas mixer in a closed loop system. The gas mixer system is based on CO₂ gas or CO₂ and N₂ gas instead of the premix gas. The gas sample ports for test of the supplied gas flow are placed behind the front cover together with the Inline filter. You will find one gas sample port for each of the two chambers. The incubator uses a high efficiency HEPA & VOC filter that is tested and manufactured according to cGMP and ISO 9001/13485. If the optional gas mixer setup is used, the Inline filter might be placed in your gas mixer system.

The incubator constantly monitors the temperatures in each chamber. If one of the temperatures exceed the predefined limits, a visual and acoustic alarm is turned on. As an optional safety feature, the incubator can also be connected to an external alarm monitoring system. This optional XLR connector is found on the back of the incubator together with the gas inlet valve, the power plug, and the on/off switch.

Next to the front cover, the incubator has a touch screen. This touch screen is used to read the currently measured temperatures, to set target temperature levels, for controlling the alarms, and for calibration of the incubator.



Illustration of a FreyGen ALF II incubator seen from the front:

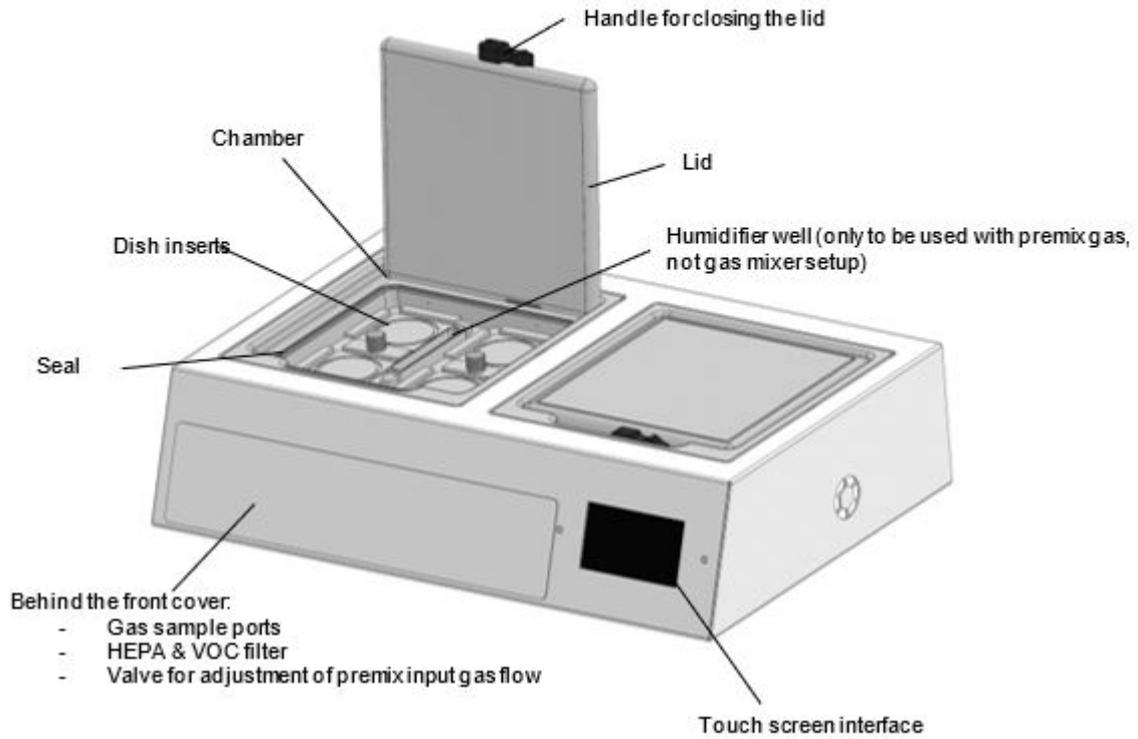
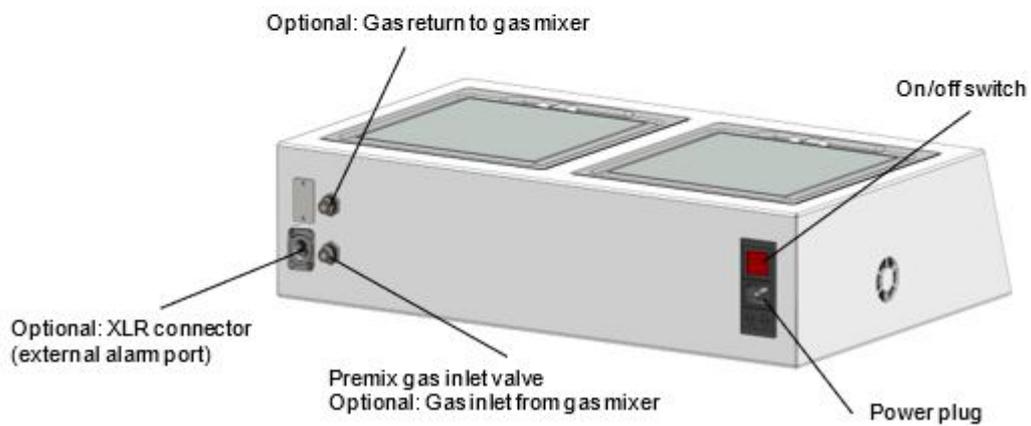


Illustration of a FreyGen ALF II incubator seen from the back:



The technical specifications for the incubator are provided in the table below.

Parameter	FreyGen ALF II	Unit
Dimensions (WxDxH)	560x380x137	mm
Product weight	21 kg	kg
Shipping dimensions (WxDxH)	740x840x370	mm
Shipping weight	48 kg	kg
Noise Level, ISO 6081	< 43	dBA
Premixed gas quality	Laboratory quality > 99.95 Purity	%
Premixed gas consumption	15mL/min to 25mL/min per chamber	mL/min
Startup time	40 minutes from turn on to fully operational	min
Temperature control range	Default setting 37 °C (adjustable 34 to 40 °C in 0.1 °C steps)	°C
Work chamber temperature deviation	± 0,2	°C
Temperature recovery time	N/A (temperature loss for 10 sec opening of lid ~ 0.1 °C)	min
Dish inserts	4	pcs
Petri dish brands / types supported	Falcon, Nunc, Vitrolife, Qosafe / round 60mm, round 35mm, 4-well dish, flat bottom (With Flat Dish Insert)	
Number of petri dishes	8 pcs 60mm and 4-well dishes / 16 pcs 35mm dishes	
Alarm sound level	>71	dBA
Alarm frequency	3,2KHz beep once every second	
Inlet for premix gas connection	6 mm pressure tube	mm
Service Life ¹	7	Years
Humidifier well (premix gas only)	For sterile water	



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